THE ARCHITECT & BUILDING NEWS

11 FEBRUARY 1959 VOL. 215 NO. 6 ONE SHILLING WEEKLY

- **ESSO RESEARCH CENTRE**
- **BRITISH COKE LABORATORIES**
- **INFORMATION DIGEST**

PUBLISHED IN LONDON SINCE 1854

On the one hand...

where time is the essence of the contract and labour costs must be kept to a minimum—the paint to select for thoroughly satisfactory results for interior walls and ceilings is

'Murisan'

LATEX EMULSION WALL PAINT

- ***Can be speedily applied with large wall brushes.***
- ***Can be second-coated within one hour***
- ***No objectionable odour.***

Conforms to the requirements of the Factories (Cleanliness of Walls and Ceilings) Order—5 years exemption from re-painting permitted if *Murisan* is used.

With a finish equal to that of conventional flat oil paints Murisan *is resistant to alkalis, oil, bitumen and creosote—odourless, durable, washable. Interior and Exterior Grades.*

On the other hand...

when a supremely high standard of gloss finish is to be achieved by craftsmen who take pride in the results the specification will, without doubt, be "Superlative," the paint of high-gloss perfection that does not 'bloom'. When great projects are planned, where long-life protection is essential, whether for exterior or interior use.

'Superlative'

THE BEST GLOSS PAINT IN THE WORLD

BPL/D79

BRITISH PAINTS LIMITED

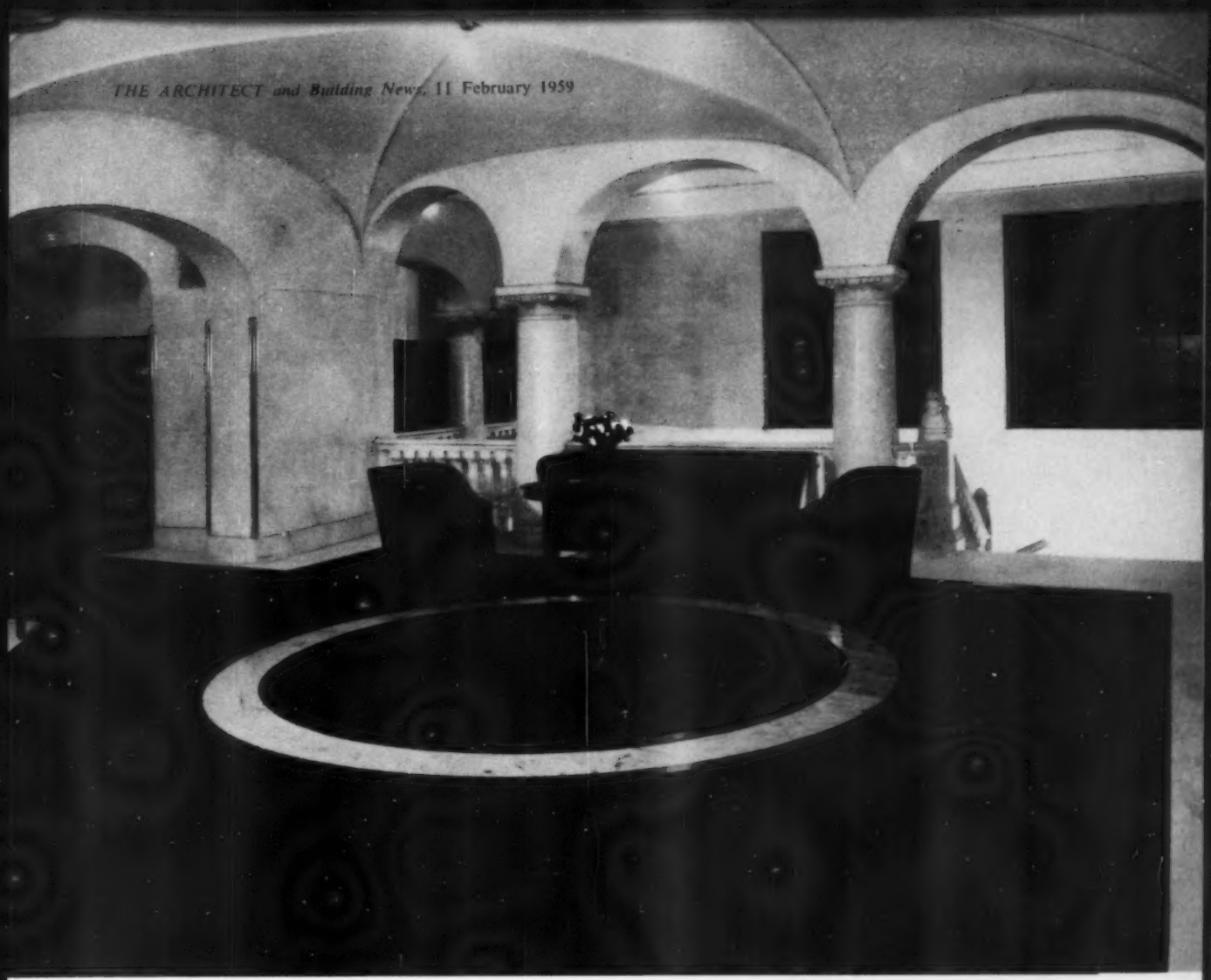
Portland Road, Newcastle upon Tyne, 2. · Crewe House, Curzon Street, London, W.1. 31, Wapping, Liverpool.

BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II MANUFACTURERS OF PAINT BRITISH PAINTS LIMITED

BELFAST · BIRMINGHAM · BRISTOL · CARDIFF · GLASGOW · LEEDS · LIVERPOOL · MANCHESTER · NORWICH · PLYMOUTH SHEFFIELD · SOUTHAMPTON · SWANSEA AND ALL PRINCIPAL TOWNS.

PAINTING ADVISORY SERVICE:

For expert advice on correct coatings for surfaces and conditions involved, do not hesitate to consult our Painting Advisory Service



Barry's Ruboleum

RUBOLEUM is a superfine linoleum. It was first produced by us in 1907 in 6.70 m.m. thick (approx. ¼") but is now available in medium thickness 4.50 m.m. (approx. $\frac{3}{16}$").

RUBOLEUM because of its properties of hygiene, resilience, durability, is a floorcovering of the highest quality. There is a decorative range of colourings, 35 in all, in plain and marble effects.

MEDIUM RUBOLEUM is also widely used on Passenger Ships throughout the world and is particularly suitable and recommended as a decorative and long wearing floorcovering in Public Buildings.

HEAVY RUBOLEUM is specially produced for use on ship decks and public buildings and any floors where there is heavy traffic.

RUBOLEUM is available through high class retail furnishers and Contract flooring specialists.

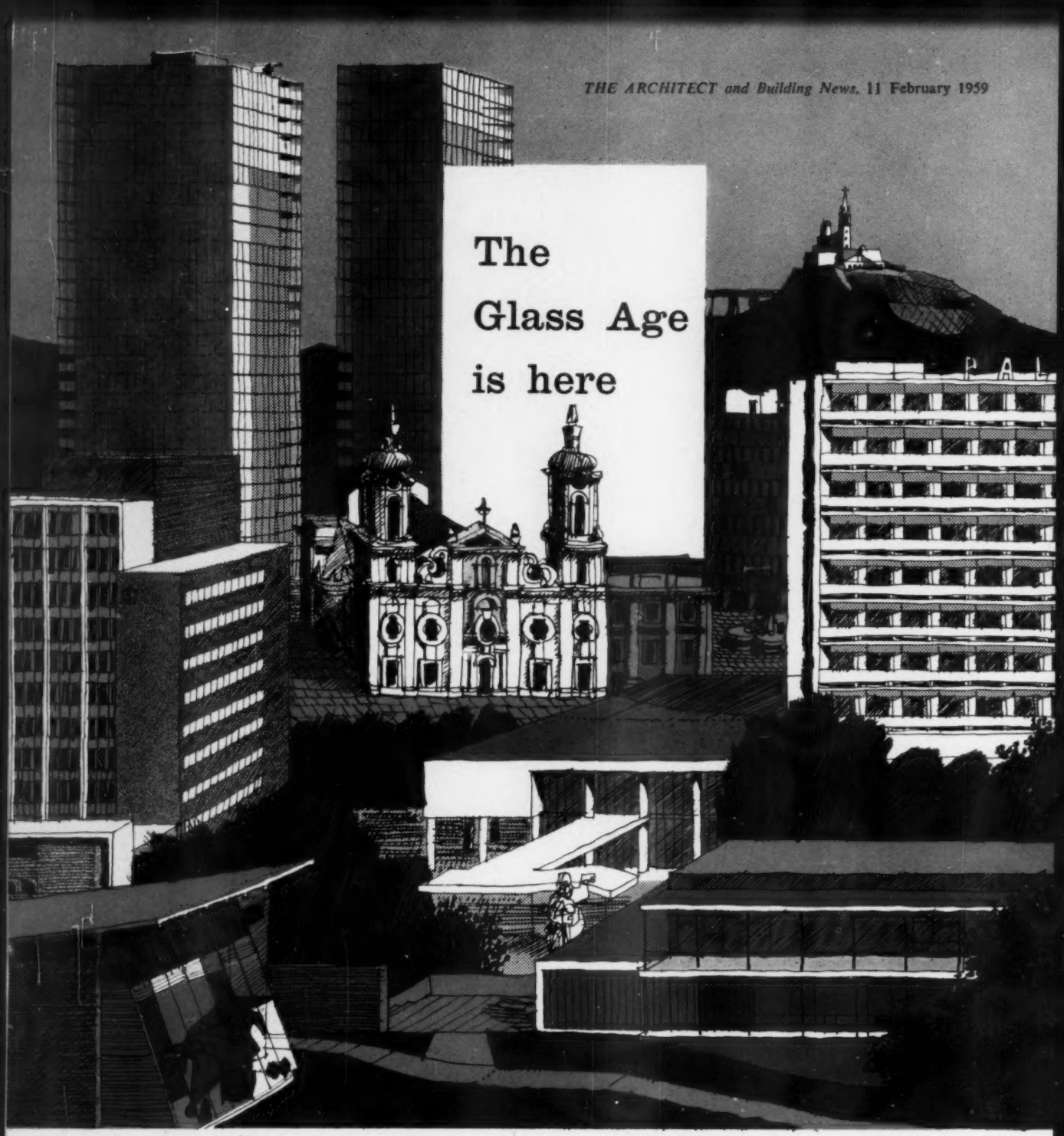
MONARCH OF THE LINOLEUM WORLD SINCE 1907

Samples on application to the exclusive manufacturers:—

BARRY, OSTLERE & SHEPHERD LTD

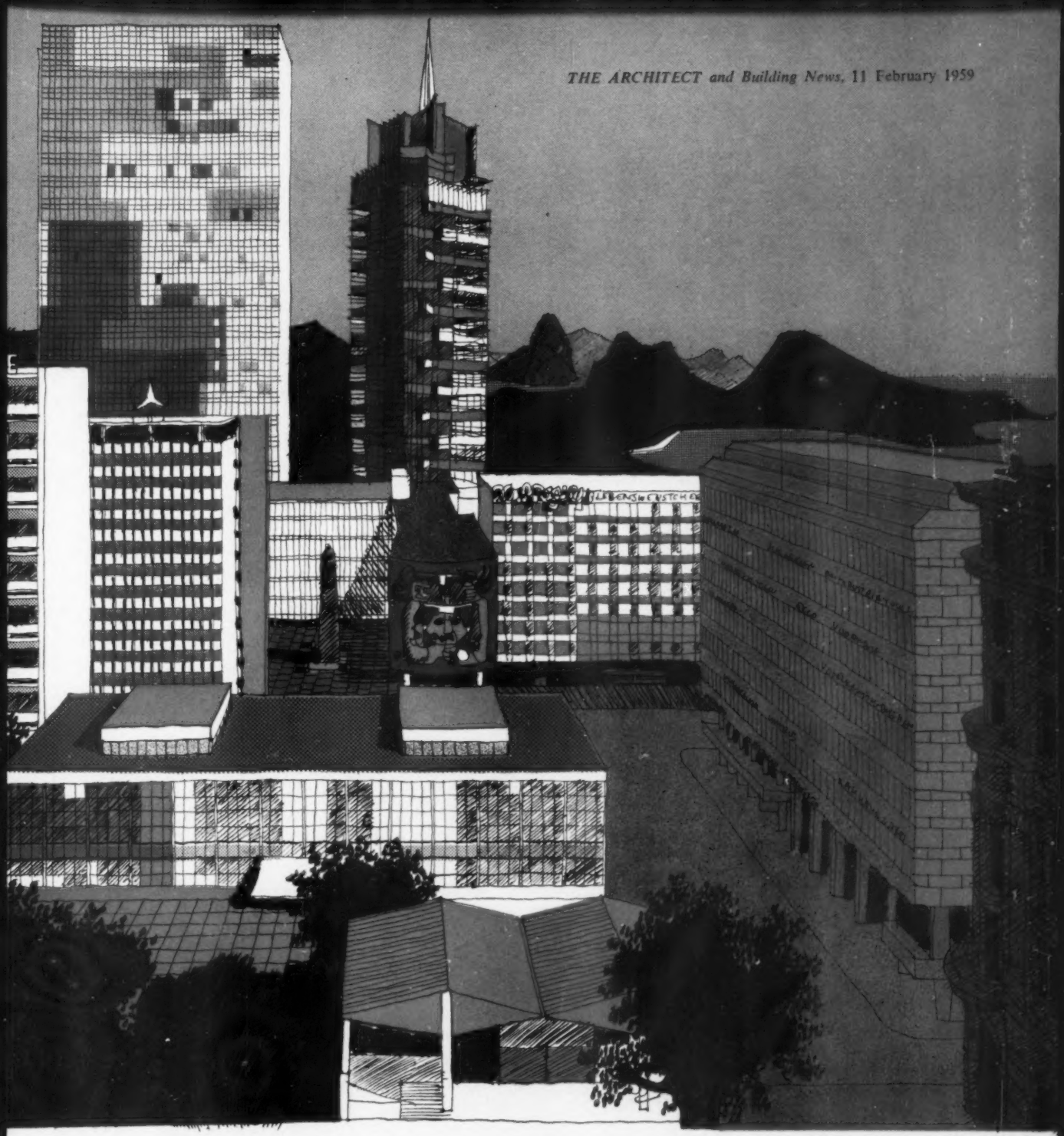
KIRKCALDY · SCOTLAND

Also from The Technical Division,
6 OLD BAILEY, LONDON, E.C.4

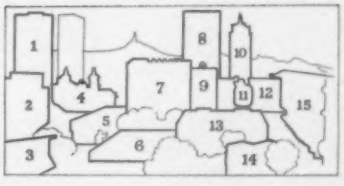


City of the World

The New Western Architecture is now spreading all over the world and bringing fresh vitality to design in hundreds of cities as, twenty centuries ago, the Classic orders spread throughout the Græco-Roman world. No complete city of contemporary buildings yet exists, but buildings that do are illustrated here, drawn by Gordon Cullen, and assembled as components of an imaginary city. This shows the part glass plays in the technique of architectural design today, and the light, airy and graceful shapes that are arising in Europe, Africa, North, Central and South America. The Glass Age is here.



1 *Lake Shore Drive, Chicago. Architect: Mies van der Rohe.*
2 *Ingram Building, Johannesburg. Architects: Cowan & Ellis.*
3 *House in Sweden. Architects: Backstrom & Reinius.*
4 *Church, in Olinda, Pernambuco, Brazil.*
5 *Casino, Pampulho, Brazil. Architect: Oscar Niemeyer.*
6 *House in Gold Coast. Architect: James Cubitt.*
7 *Palace Hotel, Milan. Architect: Ramponi.*
8 *Unilever Building, New York. Architects: Skidmore, Owings & Merrill.*
9 *Daimler-Benz Building, Unterturkheim, Germany. Architect: Rols Gutbier.*
10 *Oklahoma Tower. Architect: Frank Lloyd Wright.*
11 *University Medical School, Pedregal, Central Mexico. Architect: Espinoza.*
12 *Life Insurance Company, W. Berlin. Architect: Hans Schaefers.*
13 *Conference Hall, Geneva. Architect: A. Guyonnet.*
14 *House, Long Island Sound, New York. Architect: Ulrich Franzen.*
15 *Palace Hotel & Office Building, Helsinki. Architects: Revell & Petaja.*



PILKINGTON BROTHERS LIMITED

ST. HELENS LANCS · ST. HELENS 4001

LONDON OFFICE: SELWYN HOUSE · CLEVELAND ROW · ST. JAMES'S · S.W.1 · TEL: WHITEHALL 5672 6

QUEEN MARY COLLEGE, University of London

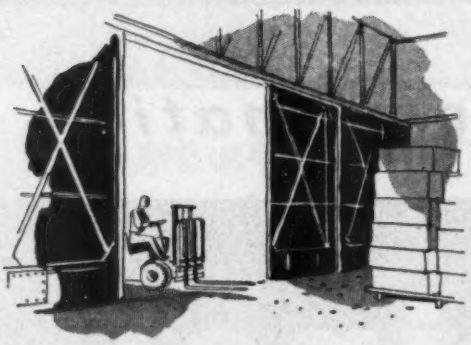
choose Ceramic Tiles

. . . the logical formula for a dignified entrance into Engineering . . . Ceramic Glazed Tiles symbolise the immutable beauty of mathematical precision — vividly translated into a background heraldic device of the College shield . . . foreground murals depict various Engineering branches housed in the College.

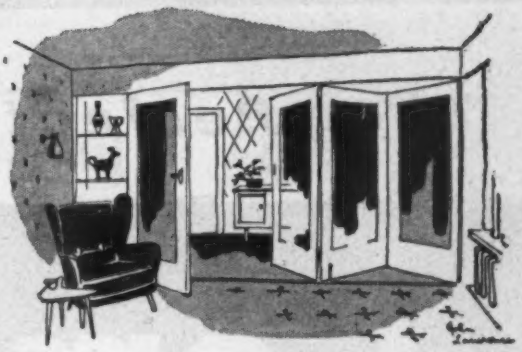
Architects: Playne & Lacey, F|F.R.I.B.A. London.
Designer: Mr. A. B. Read, R.D.I., A.R.C.A., F.S.I.A.
Tiling Contractors: Carter & Co. London Ltd., London.
Building and Engineering Contractors: Charles R. Price, London.

Ceramic TILES

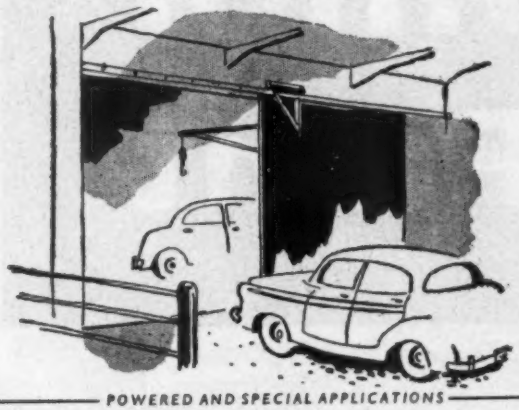
Glazed & Floor Tile Manufacturers' Association · Federation House · Stoke-on-Trent



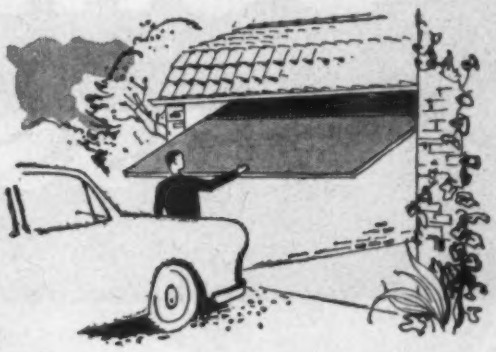
STRAIGHT SLIDING INDUSTRIAL



FOLDING DOMESTIC



POWERED AND SPECIAL APPLICATIONS



THE UPOVER

Door Craft by KING craftsmen

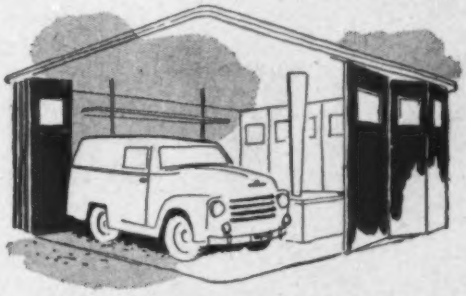
For sheer versatility and dependability, the KING range of doors and door gear is unbeatable. Close supervision at every stage of manufacture ensures the highest possible quality.

KING Door Craft is the result of 40 years experience in the design and construction of doors of every type, from simple domestic to remote controlled power-operated giants.

We can't hope to tell you all about our huge range here, so why not tell us your problem. The KING Technical Advisory Department is always ready to help on the correct application. This specialized knowledge is *free*. You will incur no obligation by enquiring. Early discussion often avoids delay and extra expense. Our representative will be pleased to call on you any time, *anywhere* in the world.

Write for literature to:

GEO. W. KING LTD., 224 ARGYLE WORKS, STEVENAGE, HERTS.
TEL: STEVENAGE 440



AROUND-THE-CORNER

KING

REGISTERED TRADE MARK

DOOR GEAR CRAFTSMEN FOR 40 YEARS

A*

The Perfect Combination

Combinol Gloss Paint

and

Valspar Eggshell Lustre

Combinol Gloss Paint

Tough — Brilliant — High Gloss Finish.
Excellent spreading power and opacity.
Resists all weather conditions.
Recommended for coastal and industrial areas.

Valspar Eggshell Lustre

Beautiful Eggshell Lustre Finish.
Easy to apply with wide brush, roller or spray.
Resists steam and condensation.
For all interior surfaces.

Also available in the British Standard Range (101 colours)

Manufactured by Goodlass Wall & Co Ltd

...well, in a sense YOU CAN!

One of the most economical ways of putting peace and quiet into a room is to use Tentest Acoustic Perfectiles. In this way, you very cleverly combine quietness with a high degree of insulation, because Perfectiles are made from the highest grade Canadian Fibre Board. Perfectiles are pre-decorated with face edges bevelled and are supplied in the following sizes: 24" x 24", 24" x 12", 12" x 12", in thicknesses of ½", ⅝" and ¾". There is also a 2 ft. x 2 ft. x ¾" board slotted for concealed metal fixing. Literature is available, including a Brer Rabbit treatise on Rabbit Warren acoustic panels.

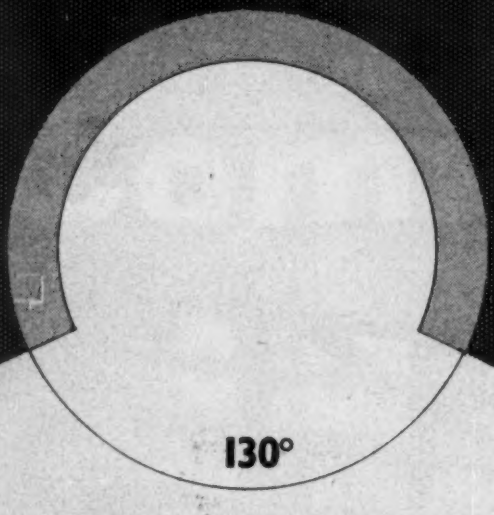
Our Technical Advisory Service is at your disposal.

TENTEST FIBRE BOARD COMPANY LIMITED
FIBOARD HOUSE, OAKLEIGH GARDENS, LONDON, N.20
Telephone: HILLside 8801 (7 lines)

PERFECTILE ACOUSTIC and INSULATION PANELS

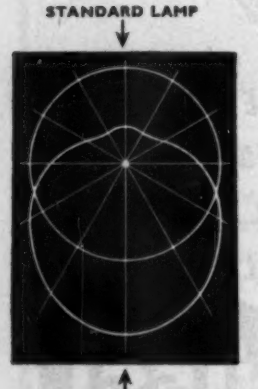
TENTEST
TRADE MARK

Get more light at no extra cost! fit PHILIPS Reflectalite



— the fluorescent tube that now gives even more light in the useful direction

Philips "Reflectalite" is the fluorescent tube that defeats light wastage caused by dust accumulation. And today it's a better buy than ever. For, in addition to its basic increase in lighting efficiency, the light output of "Reflectalite" tubes has been further increased to give you *even more light* in the useful direction. For instance, the 40W Cool White tube now has 10% greater efficiency. "Reflectalite" has a special built-in reflector covering two-thirds of the internal surface. The major part of the light output is reflected through the 130° 'window' *where it has maximum effect.* (See diagrams.)



REFLECTALITE LIGHT DISTRIBUTION COMPARISON DIAGRAM

Available in Cool White, Cool White de Luxe and Warm White

SWITCH START or INSTANT START

4′ 40W. 13/9d. plus P.T. 5′ 80W. B.C. or Bi-Pin 14/9d. plus P.T.

Next time you need a tube – fit a

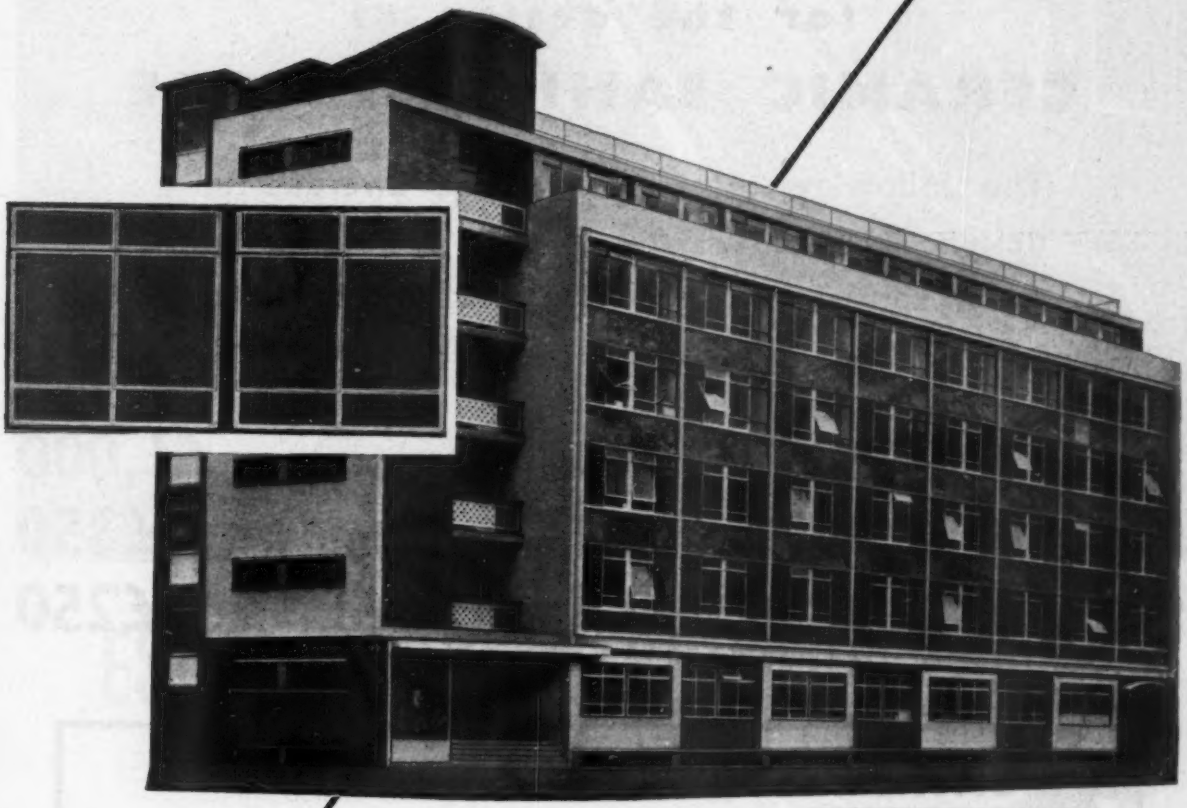
PHILIPS **Reflectalite**

FLUORESCENT REFLECTOR TUBE

Philips Electrical Limited · Lighting Division · Century House · Shaftesbury Avenue · London · W.C.2

(LD3106)

When there's no 'STANDARD' *answer...*



Chile House, Ropemaker Street, E.C.2.
Architects:
Joseph Mendleson & Partners A/A.R.I.B.A.
Contractors:
Gee, Walker & Slater, Ltd.
Purpose-made metal windows and doors by A. Beanes & Co., Ltd.

CONTACT **BEANES**

FOR *Purpose-made* METAL WINDOWS

A. BEANES AND COMPANY LIMITED

BRIDGE WHARF · BISHOP'S BRIDGE RD · LONDON · W.2 Tel: PADdington 4057-3144

METAL WINDOW MANUFACTURERS SINCE 1877

WB

ASSOCIATED BUILDERS MERCHANTS LIMITED

COMPETITION

for the design of

CERAMIC SANITARYWARE

The following prizes are to be awarded in a design competition for items of sanitaryware which combine modern appearance and compliance with the present-day high standards of hygiene.

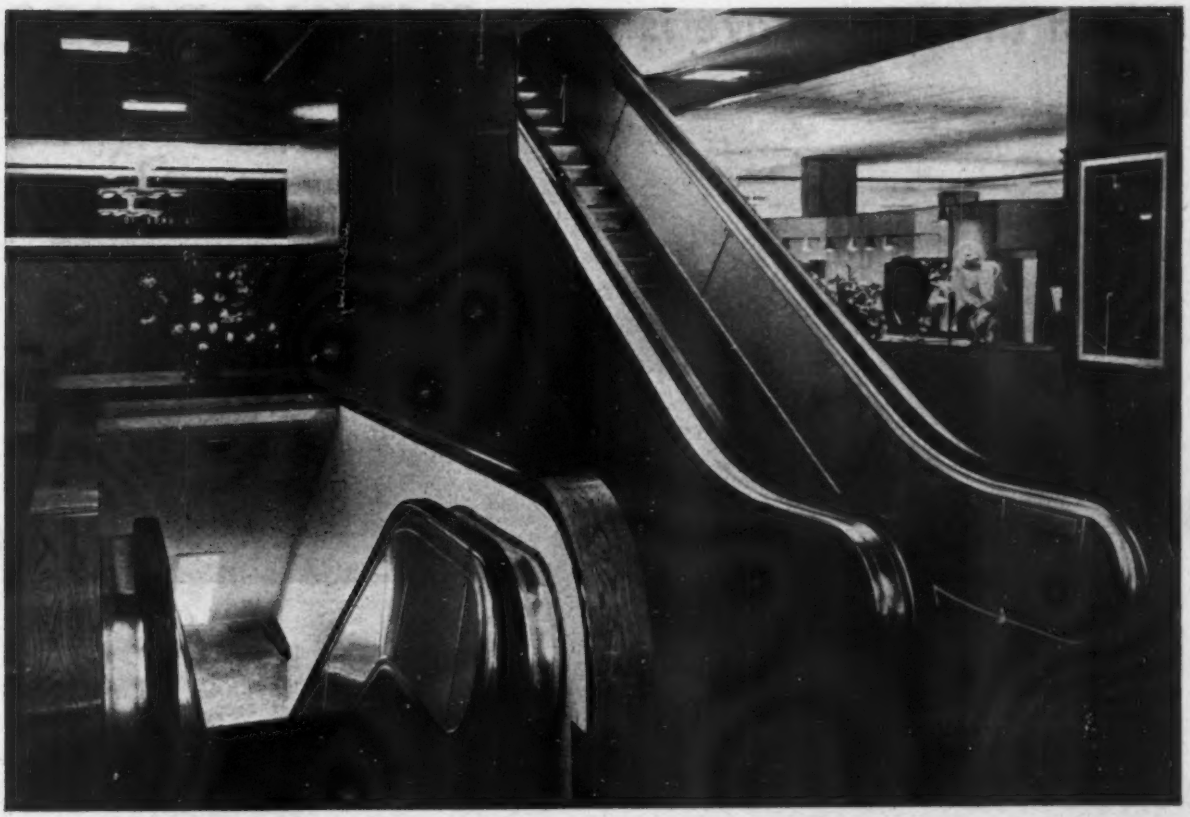
SET OF DESIGNS PLACED 1st . £1,000
SET OF DESIGNS PLACED 2nd . £350
SET OF DESIGNS PLACED 3rd . £250

IMPORTANT:

In order to meet wishes of overseas competitors it has been decided to extend last date of registration to 9th March, 1959 and last date of submission of entries to 2nd May, 1959. (12 noon.)

Conditions of competition, together with form of registration can be obtained from

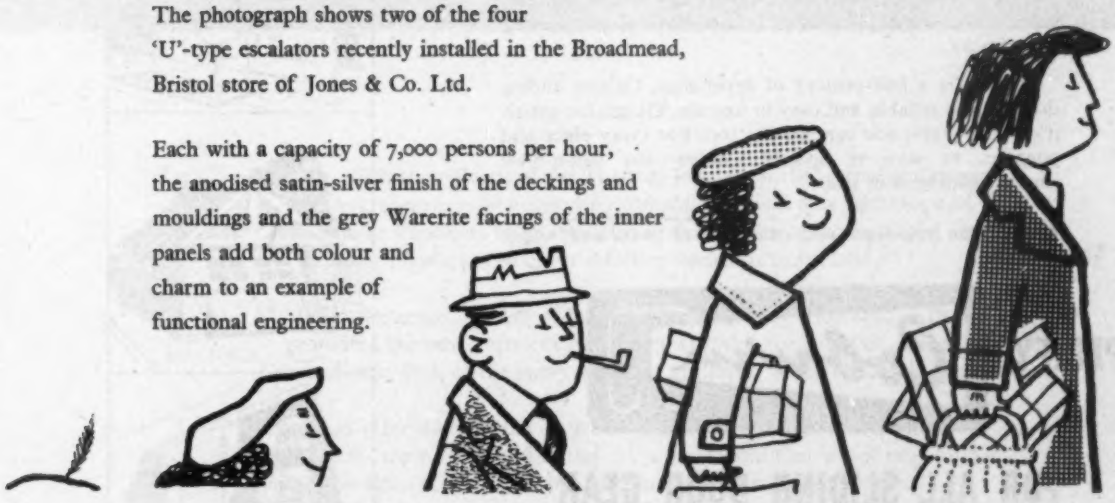
ASSOCIATED BUILDERS MERCHANTS LIMITED
BROKEN WHARF, UPPER THAMES STREET, LONDON, E.C.4



ESCALATORS in BRISTOL STORE

The photograph shows two of the four 'U'-type escalators recently installed in the Broadmead, Bristol store of Jones & Co. Ltd.

Each with a capacity of 7,000 persons per hour, the anodised satin-silver finish of the deckings and mouldings and the grey Warerite facings of the inner panels add both colour and charm to an example of functional engineering.



J. & E. HALL LIMITED DARTFORD KENT

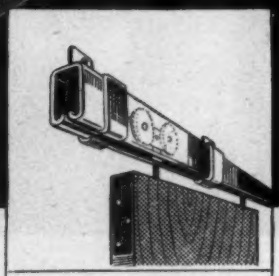
LONDON OFFICE: 10 St. Swithin's Lane, E.C.4 Telephone: MANSION HOUSE 9811

ESCALATOR, LIFT AND REFRIGERATION ENGINEERS

Branches in MANCHESTER, NEWCASTLE, BIRMINGHAM, BRISTOL and GLASGOW

AP 95

When the brainwave is SLIDING DOORS



. . . you must remember

COBURN GEAR

Sliding doors? Coburn—of course! For really superior gear . . . doors that smoothly, almost silently, glide along their tracks.

Backed by a half-century of experience, Coburn sliding door gear is reliable and easy to operate. Gauge for gauge, it's the strongest you can specify, too. For every place and purpose, be sure to specify Coburn—the s-m-o-o-t-h running sliding door gear.

★ *Send for free illustrated catalogue of gears and prices.*

SPECIFY Coburn

FOR ALL SLIDING DOOR GEAR

COBURN ENGINEERS LTD
PEASMARSH, GUILDFORD, SURREY
Telephone : Guildford 3373

LONDON OFFICE : 25 COPPERFIELD STREET, LONDON, S.E.1. TELEPHONE : WATERLOO 4311

the most economical

thermal insulation

plus the bonus of

fire resistance

For further details, turn the page . . .

With the passing of the Thermal Insulation (Industrial Buildings) Act, there is now a statutory obligation for all new factories and similar structures to be insulated in accordance with prescribed standards. Further legislation to cover dwelling houses is projected.

In consequence, owners of buildings are naturally concerned with providing the best means of insulation with the minimum of capital expenditure. But, of the many methods available, which should they select?

Common sense dictates the choice of an insulating material that offers the greatest return for initial outlay . . . a material that is not only highly efficient and most economical, but one that also provides exceptional fire resistance at no extra cost.

An insulating material that possesses these advantages and complies with all the requirements of the new Act is readily obtainable today.

Improvements in the better thermal insulation of houses, bungalows and flats can be provided for now—early in the design stage.

EARLY CO-OPERATION WILL ENSURE GOOD DESIGN

Paramount INSULATING PLASTERBOARD

1 for Industrial Buildings

In large factories, workshops and other similar types of buildings, thermal insulation is essential—to keep internal temperatures at a comfortable level, improve working conditions, reduce absenteeism and achieve higher production.

Paramount Insulating Plasterboard, consisting of plasterboard with a veneer of polished aluminium foil inseparably bonded to one surface, serves the double function of keeping the building warm in winter and cool in summer. Used as a roof lining (under corrugated sheeting and with an air space), the "U" value complies with the Thermal Insulation (Industrial Buildings) Act. Paramount Insulating Plasterboard is inexpensive. In old buildings, initial outlay can be recovered by fuel savings in 2-5 years. In new structures, the cost of its use is usually offset by lower expenditure on smaller, less costly heating equipment.

2 for Farm Buildings

On farms where pigs, chickens and other livestock need to be kept warm, dry and healthy, Paramount Insulating Plasterboard plays an important part. Used as a lining to roofs and ceilings, it helps to maintain interior temperatures at required levels, forms an effective and permanent barrier against moisture and greatly reduces the risk of fire. Strong, durable, inert, easy to handle, cut and erect, Paramount Insulating Plasterboard is the most economical means of insulation, costing less than 6d. per sq. ft.

3 for Domestic Buildings

In private houses, the need for efficient thermal insulation is equally important. The current trend toward "open plan" houses and the rising cost of fuel make insulation imperative. To be really comfortable, large undivided rooms must be warm and dry, irrespective of weather conditions.

Paramount Insulating Plasterboard helps to achieve this aim by preventing heat losses. In doing so, it reduces fuel costs to the minimum and provides an added benefit in the form of high fire resistance.

Thermal insulation is a major consideration to potential buyers. Houses incorporating Paramount Insulating Plasterboard are easily sold.

BLUE HAWK PRODUCTS

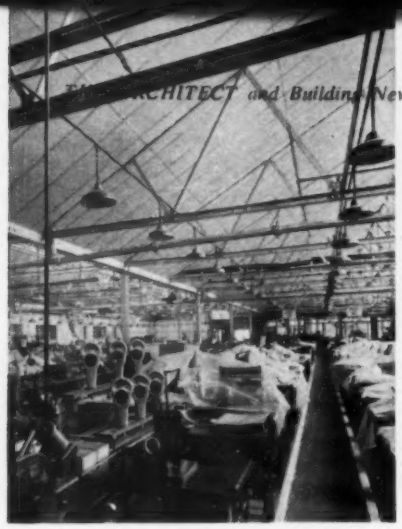
British Plaster Board insulating

Paramount PLASTERBOARD

The ideal building board for fire-safe construction. Made from Gypsum, the incombustible mineral, this popular board is graded as a Class 1 material—that is, one that constitutes no fire hazard. It requires no expensive fire-retarding surface treatment or impregnation of any kind and is, in fact, the most economical form of fire protection—costing about 4d. per sq. ft. It also provides good thermal and sound insulation.

Paramount Plasterboard, employed as a lining to walls, partitions and ceilings, acts as a highly effective barrier to flame spread. Used to clad structural steelwork, it increases resistance to intense heat from minutes to hours.

AP 158



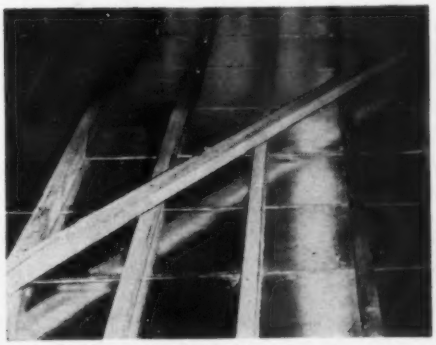
Paramount Insulating Plasterboard used as a roof lining in the factory of Venner Accumulators Ltd., New Malden. Note the parking meters!!

1

1 *Paramount Plasterboard used for the roof lining of the new factory for Messrs. Bryant & May Ltd., Glasgow. Making matches in safety!!*

Walls and ceilings of Paramount Insulating Plasterboard cut fuel costs by preventing the losses in this new home. **3**

2 *30,000 chickens are kept warm and dry by using Paramount Insulating Plasterboard in this one house alone.*



3 *Paramount Insulating Plasterboard forming the ceiling of a modern home. (View in the roof space)*

The roof of a piggery lined with Paramount Insulating Plasterboard. **2**

and fire-resisting products

BLUE HAWK PRODUCTS

Paramount Plasterboard used as a lining to traditional walls.

Blue Hawk RSJ Clips employed to clad beams with Paramount Plasterboard.

BLUE HAWK PRODUCTS

the range of

BRITISH PLASTER BOARD

gypsum/fire-resisting products includes

Thistle

- ☐ Plaster Baseboard
- ☐ Plaster Lath
- ☐ Board Finish Plaster
- ☐ Browning and Wall Finish Plasters
- ☐ Metal Lathing Plaster
- ☐ Acoustic Plaster
- ☐ Concrete Bonding Plaster
- ☐ Insulating Plaster Baseboard
- ☐ Insulating Plaster Lath

Paramount

- ☐ Plasterboard
- ☐ Insulating Plasterboard
- ☐ ⅜″ Plasterboard for Two-inch Solid Partition
- ☐ Dry Partition
- ☐ Cove
- ☐ Water Resisting Plasterboard
- ☐ Plastic Faced Plasterboard

Paraclip

- ☐ System of Suspended Ceilings and Wall Linings

Blue Hawk

- ☐ Flooring
- ☐ RSJ Clip

For further information please
TICK the products in which you are interested.
PRINT your name and address below.
CUT OUT along dotted line.
SEND TO:

THE

BRITISH PLASTER BOARD

(Manufacturing) LTD

BATH HOUSE, 82 PICCADILLY LONDON, W.1. TELEPHONE GROSVENOR 8311

NAME & INITIALS .....

PROFESSION OR STATUS .....

COMPANY OR ORGANISATION .....

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.....

(BLOCK CAPITALS PLEASE) ABN

This advertisement is produced to B.S. 1311, 1956, governing Trade & Technical publications.

AP 158

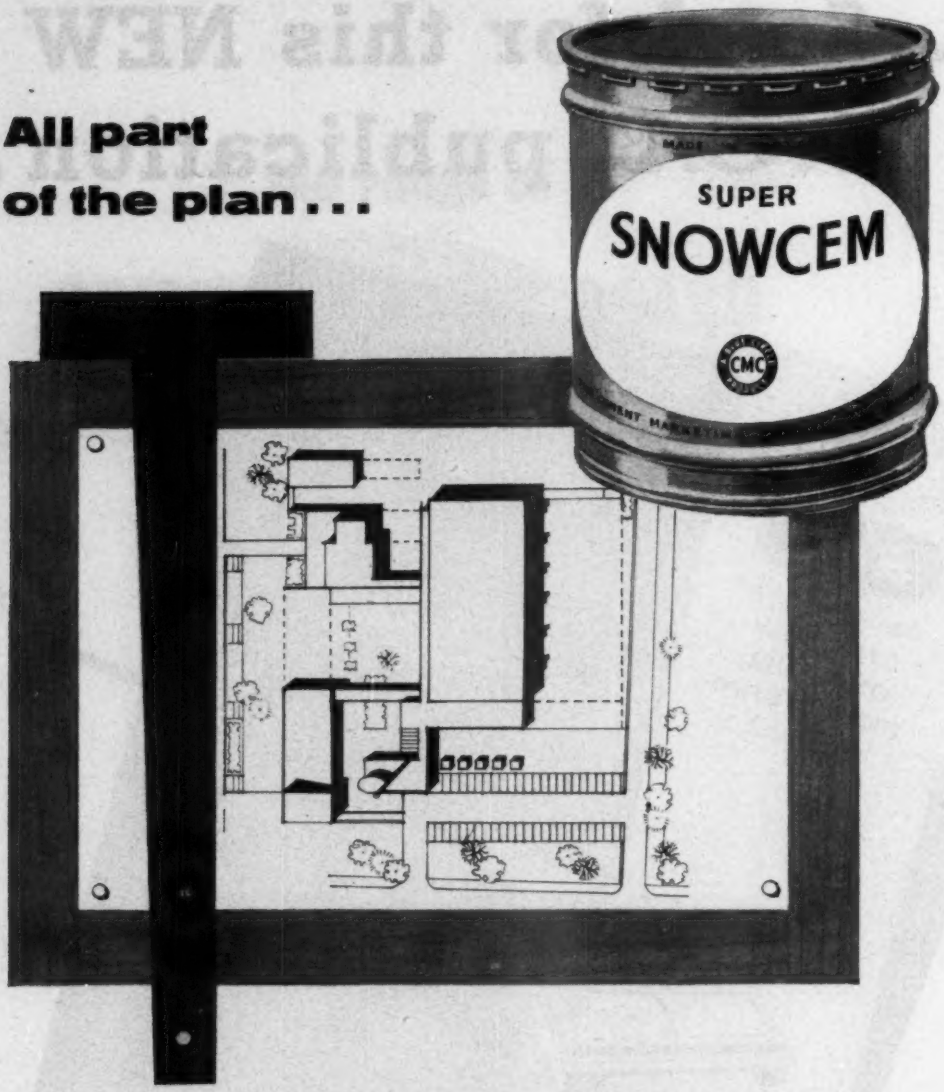
....Send for this NEW G.E.C. publication....

. . . . . which describes and illustrates a duct system specially designed for installations in very shallow floors

Write for publication C4508

THE GENERAL ELECTRIC CO. LTD., MAGNET HOUSE, KINGSWAY, LONDON, W.C.2

All part of the plan . . .



Super SNOWCEM is ideal for these reasons

- Decoration and protection at the lowest possible cost.
- Easy and quick to mix.
- Attractive range of bright colours.
- High degree of opacity and obliteration.

Super SNOWCEM is ideal for these surfaces

Concrete, cement/sand renderings, cement/lime/sand renderings, roughcast and pebbledash, stock bricks, concrete blocks and concrete bricks, clinker and other lightweight concrete blocks, asbestos cement sheets and most wall and fibre boards.

CMC A BLUE CIRCLE PRODUCT **SUPER SNOWCEM** WATERPROOF CEMENT PAINT

Write for leaflet and shade card to:
THE CEMENT MARKETING COMPANY LIMITED, PORTLAND HOUSE, TOTHILL STREET, LONDON, S.W.1.
G. & T. EARLE LTD., HULL. **THE SOUTH WALES PORTLAND CEMENT & LIME CO. LTD.,** PENARTH, GLAM.

T159

The above photograph shows BRABY 'Bar-Form' Partitions supplied and fixed at the new Research and Design Building of Messrs. C. A. Parsons & Co. Ltd., Newcastle-on-Tyne.

Interior Design

BRABY 'Bar-Form' Aluminium Partitions are outstanding features in any setting . . . outstanding in design, outstanding in appearance.

Constructed of extruded aluminium alloy sections with double dado panels of sheet steel or aluminium, insulated with slag wool. The components are designed for rapid assembly and dismantling so that additions and alterations are made easily and rapidly.

OTHER BRABY PRODUCTS INCLUDE

Metal Windows
Structural Steelwork
Pressed Steel Stairs
Dovetail Steel Sheets
Copper and Zinc Roofing
Ducting
Tanks, Cisterns and Cylinders

ONE OF THE WIDE RANGE OF

BRABY

PRODUCTS

FREDERICK BRABY & COMPANY LIMITED

ECLIPSE WORKS, PETERSHILL ROAD, GLASGOW, N. TELEPHONE: SPRINGBURN 5151

OTHER FACTORIES AT: London Works, Thames Road, Crayford, Kent. TELEPHONE: Bexleyheath 7777
Havelock Works, Aintree, Liverpool, 10. TELEPHONE: Aintree 1721
Ashton Gate Works, Bristol, 3. TELEPHONE: Bristol 64041. And Falkirk

OTHER OFFICES: 352-364 Euston Road, London, N.W.1 (Head Office). TELEPHONE: EUSton 3456
110 Cannon Street, London, E.C.4 (Export). TELEPHONE: MANsion House 6034
Queen's Buildings, 10 Royal Avenue, Belfast. TELEPHONE: 26509
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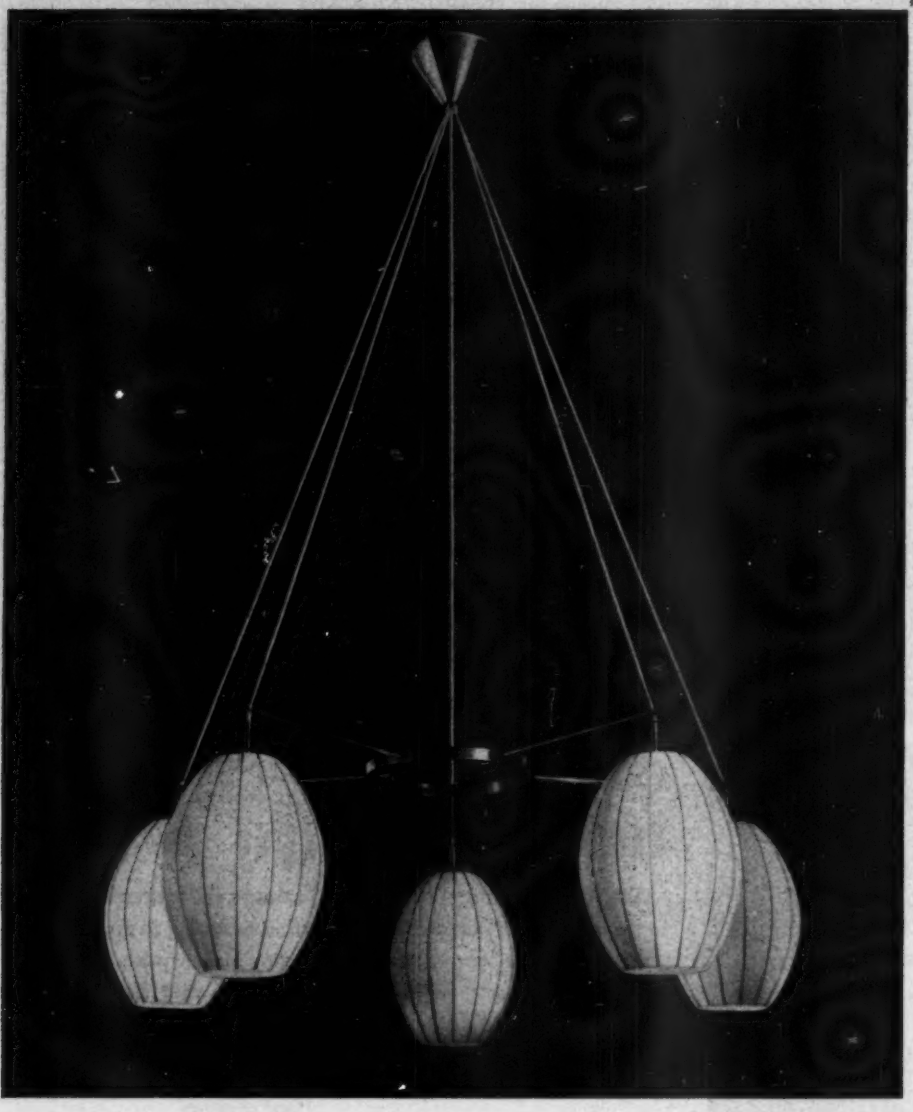
AP293

Venus Fittings by FALKS



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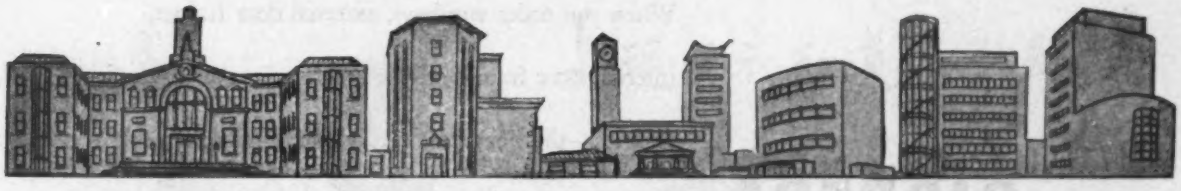

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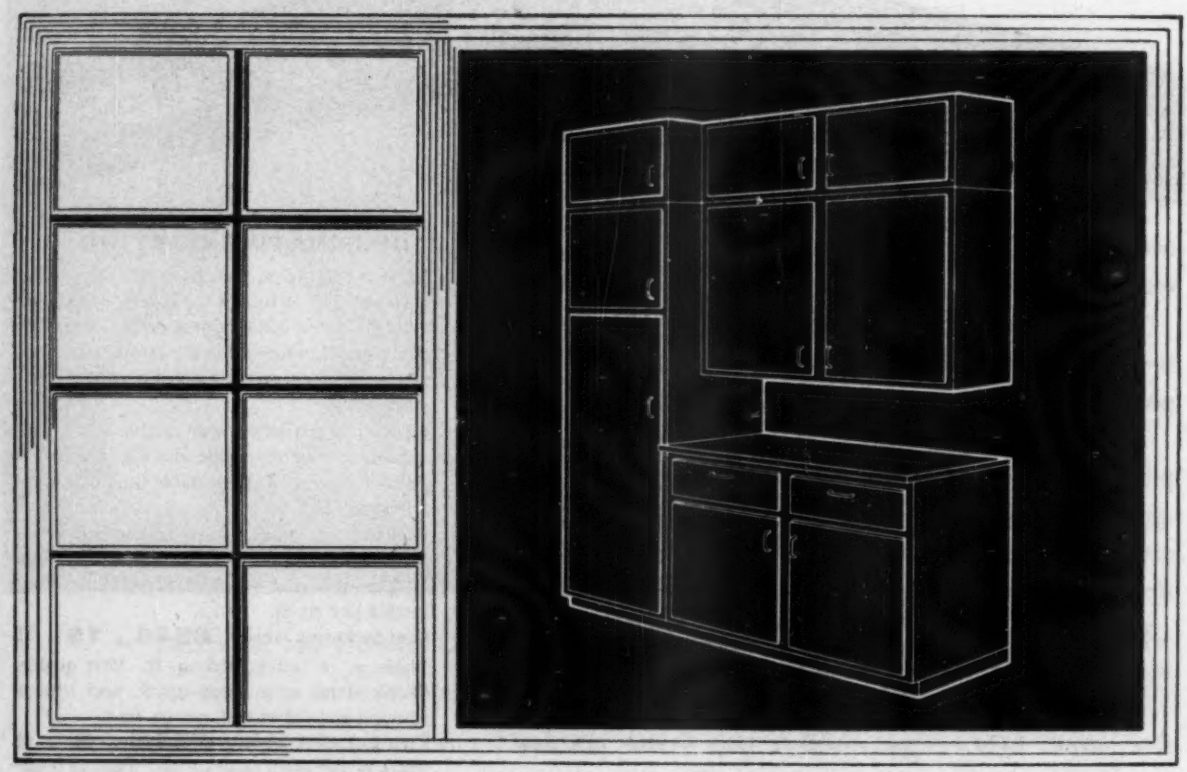

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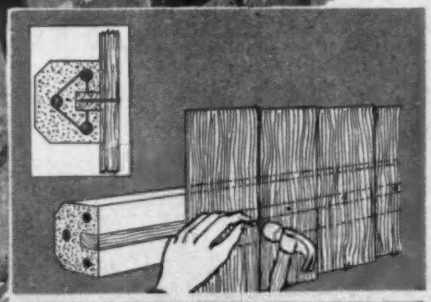

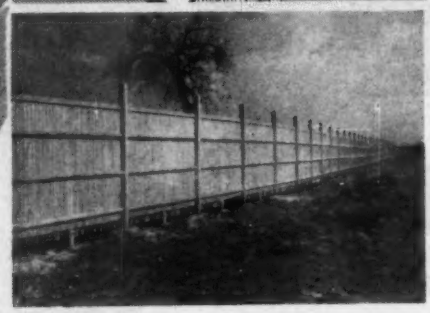

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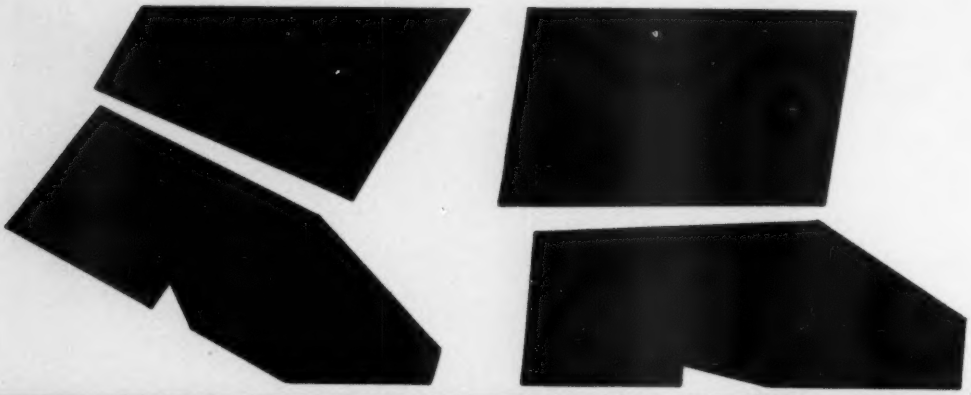

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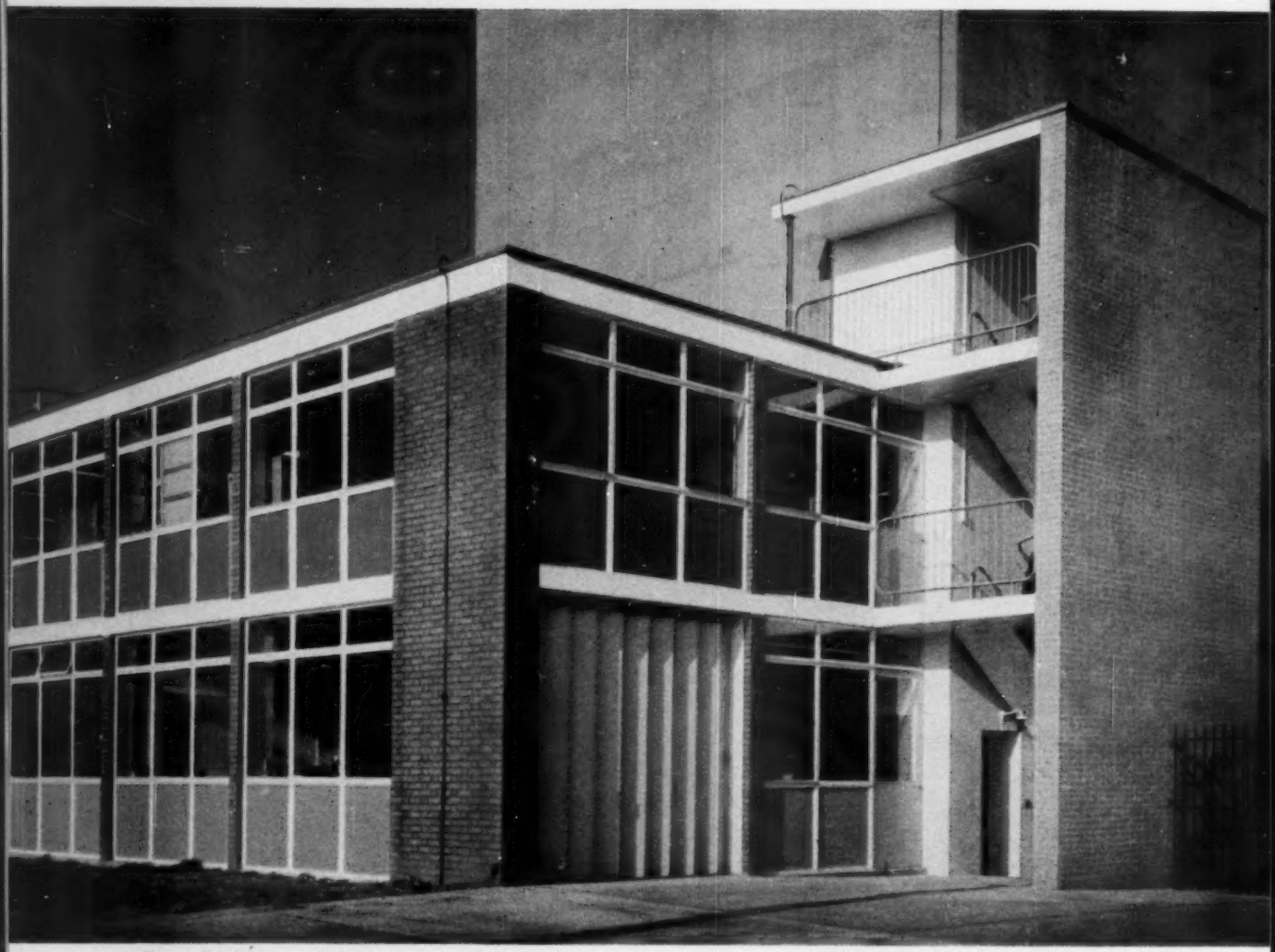

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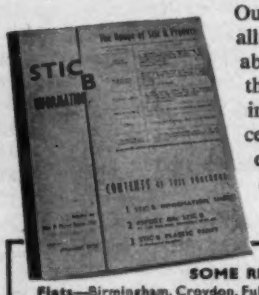

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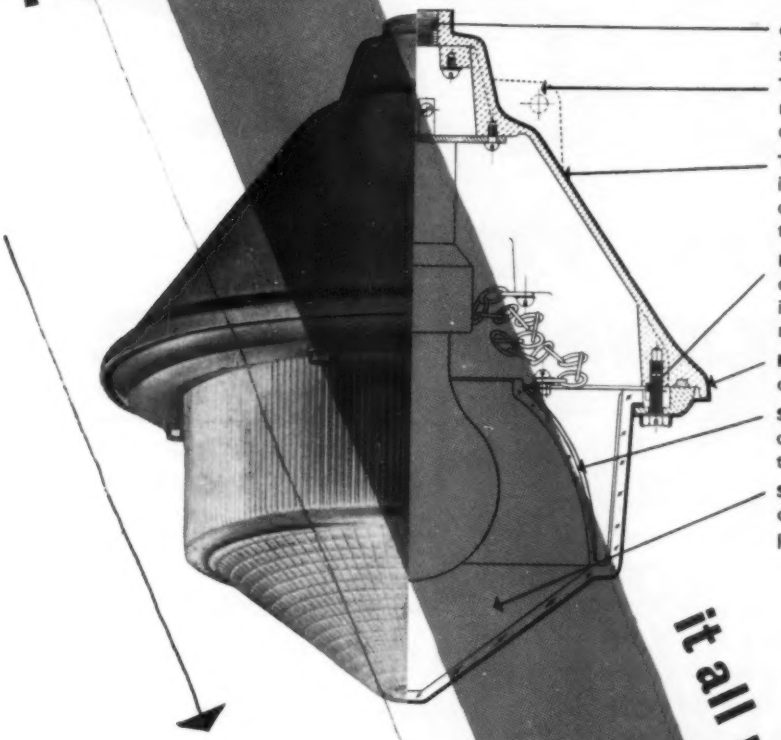

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+ COST OF OVERHEADS

+ COST OF HOLD-UPS

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No corrosion Remarkably resistant to acids and alkalis.

No root growth The close fitting tapered joints are machined to close limits.

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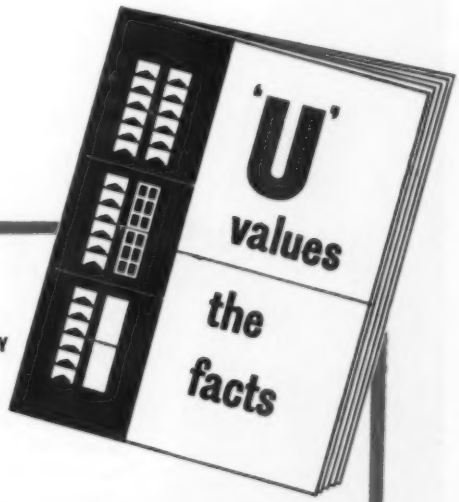
# of importance to all in the building industry

Did you know

✳ That there is a considerable difference between the conductivity of the brickwork in the inner leaf and that for similar bricks in the outer leaf of a cavity wall due to difference in moisture content ?

✳ That clay products take up very little moisture when exposed to normal atmospheric conditions inside a building ?

✳ That a very good 'U' value can be achieved by the use of an all-clay wall with the attendant advantages of cheapness and freedom from cracking ?



These are facts

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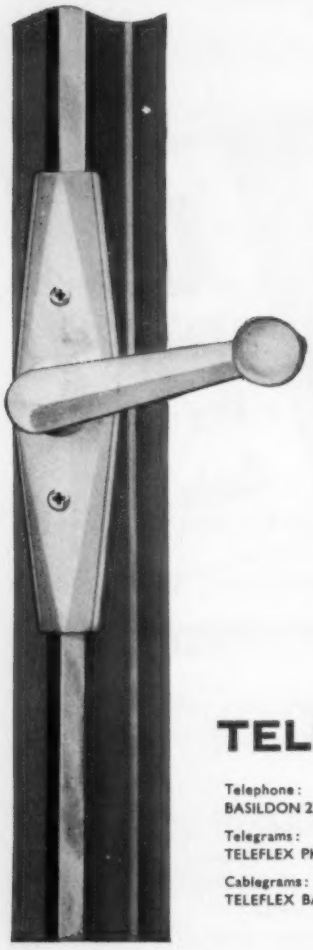

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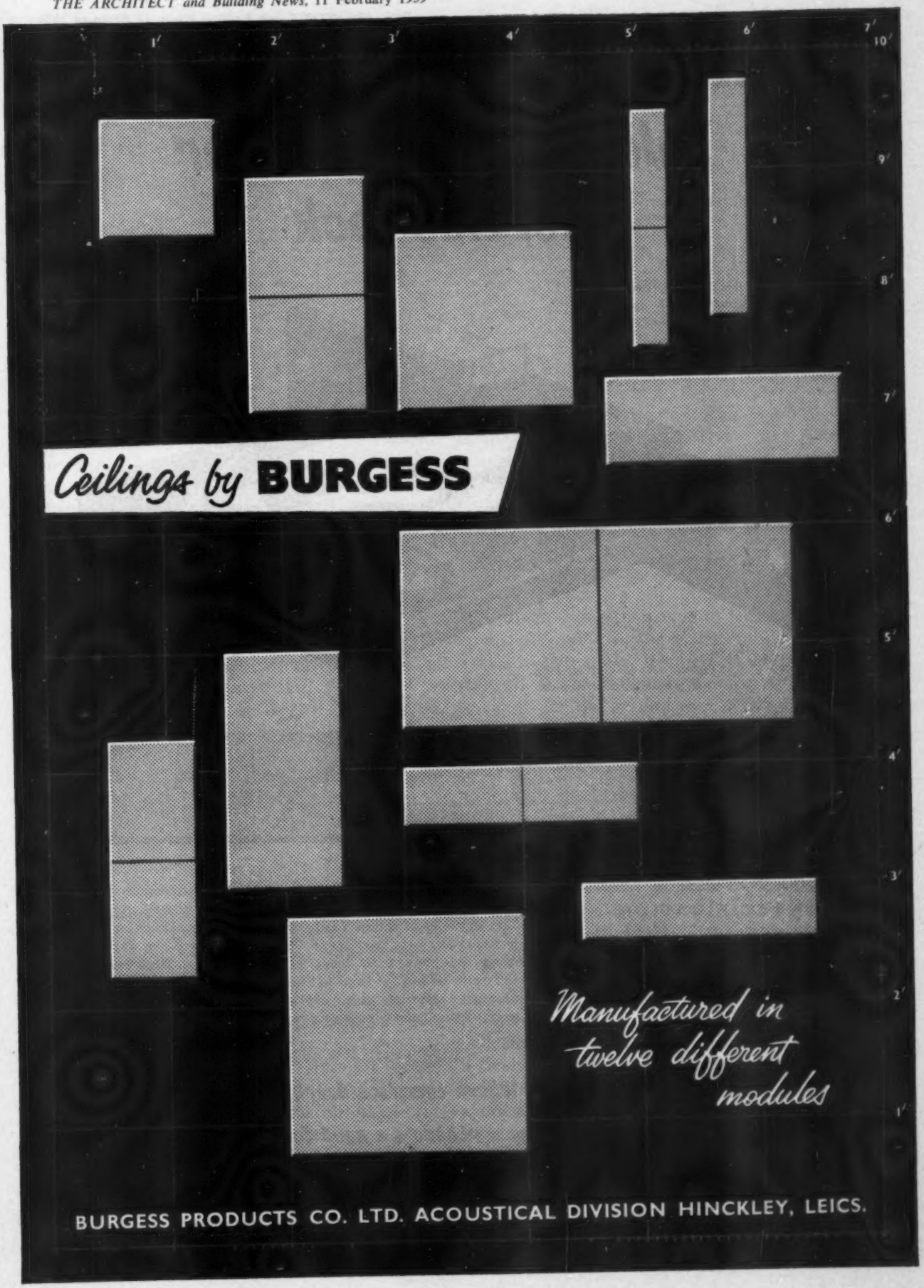
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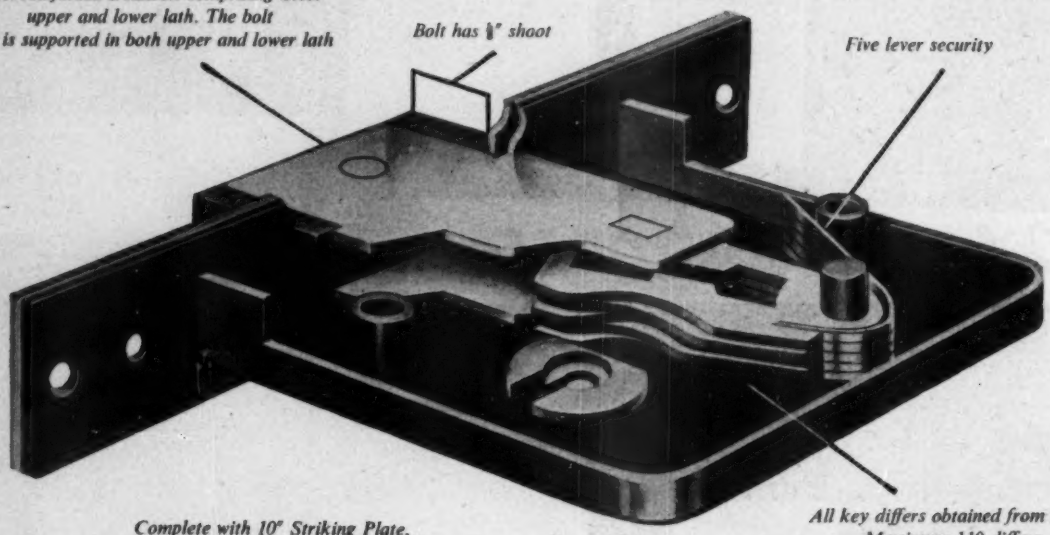

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Vol. 215 No. 6

THE ARCHITECT & BUILDING NEWS

11 February 1959

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DUSTING WON'T DO

WHAT is wrong with the prizes and studentships offered by the Royal Institute of British Architects? Or what is wrong with the young men of today, that their entries are so poor and the number of them so few? Is it that they could not care less for prizes worth a total of three thousand pounds, tax free?

Those who this year have looked at the students' work and listened to the critic's comments may well wonder. But the situation is not a new one. We commented on it in this column over a decade ago.

Each year since those days it has become more obvious that the prizes are becoming farther and farther removed from the times we live in. No doubt there has always been hope in the hearts of the appropriate R.I.B.A. Committee members that once students "settled down" after the war the prizes would come back into favour. The students have not settled down, and after this year's efforts hope must surely be down to the last spark. This year's critic has been asked by the Board of Architectural Education to report to them on the year's entry and to suggest ways in which the appeal of the prizes can be re-kindled, and widened. The critic himself has invited suggestions.

It should be remembered that the prizes may not be altered without Privy Council approval. But if this is made an excuse for doing nothing or merely amending a few of the details, there will be no change in the situation as it exists. Nor will it do just to take each individual prize off the shelf, dust it, and put it back again. This was done a few years ago with the Arthur Cates prize, resulting in no change, no increase in the number of entrants. Something much more radical is required. A fresh approach to the whole subject is called for.

The prizes roughly divide into three groups: research, design and appreciation of past buildings.

In the first group, instead of letting hopeful applicants put forward the subjects they would like to study, it might be an improvement if a small committee agreed on the research to be carried out. Applications could then be invited for that task. The prize money would have to be large enough to attract the best brains. A sum of two hundred pounds does not do that now. A thousand pounds would be nearer the mark. It might therefore be necessary to amalgamate some of the prizes.

The first question that needs to be answered in connection with the design prizes is, whether there is, in fact, any necessity for them today.

There are four prizes for the study of past masterpieces, and here there may be an opportunity for more amalgamation.

There is a good enough reason to attempt a fresh approach to the whole subject of the prizes merely to avoid them yearly becoming more of a farce; but as they were originally intended for the benefit of the younger members of the profession, there is an obligation to the original donors to bring them up to date.

The Tellurometer, a new instrument which uses electronic waves for measurement of distances in survey work. The probable error of the system is claimed to be one part in 300,000

EVENTS AND COMMENTS

NUCLEAR DISARMAMENT

The Architects' Group of the Campaign for Nuclear Disarmament has designed and built a travelling exhibition, which I was invited to see at the campaign's reception at St. Pancras Town Hall on January 18. The reception proved disappointing: large numbers of people sitting round square tables on the vast floor of the Assembly Rooms while clerics harangued them in a rather matey way from behind a microphone. A short German gentleman would then translate for the benefit of the big contingent of West Germans present. The young people of what I gathered one should call "the Movement" were Toulouse-Lautrec-bearded and *clochard*-costumed if male; black-stockinged man's-sweatered, pale and interesting if female. The older delegates were, with all respect, benign, gentle and ineffectual. There was one man with a silver beard and a hand-woven jerkin suit. I had the feeling that if nuclear war is prevented, it will not be through the efforts of these devoted citizens.

The travelling exhibition is some 30ft by 10ft, and is one of those in-and-out arrangements of screens, lit by what looked like home-made lamps. Clearly the exhibition was done on a shoestring, and, on that basis, done quite well, with its alternation of blown-up photographs, black panels and white panels bearing propaganda. But there seemed to me an awful lot of thumb marks on the white, and I felt a careful clean-up would have done a lot for it. As for the arrangement of the propaganda material in the exhibition, it seemed to me to mirror a weakness in the general "ban-the bomb" movement—for of all the screens in the exhibition, just a single small one gave the constructive suggestions as to *how* the banning of the bomb might be brought about. Otherwise the exhibition deals entirely with the effects and horrors of nuclear war. Surely it is not enough merely to work up a horror of the bomb any more than you can cure cancer by telling people how nasty it is?

NORWEGIAN ART TREASURES

I confess I have not seen this exhibition yet. My agent has and writes as follows: If your taste is for the primitive and folksy, such as oak chairs that look as though they were chopped in one piece from the tree trunk, or cushion covers that might, or might not, have been worked by eight-year-old Evangeline in 1870, the exhibition of Norwegian art treasures, open until March at the Victoria and Albert Museum, will fascinate you. It is the folksiest thing to hit London since "Oklahoma". As the hand-list tells us, there are here represented 900 years of textiles, sculpture and silver; and by and large, and to my irreverent eye, it is a sombre warning of what the history of English art might have been without the Norman and subsequent French connections. For example, there is a large cupboard, carved and painted in red, blue and ochre. It is a massive object and, except for the fact that the heavy carving of the door panels is Baroque, is very like an English cupboard of the early seventeenth-century. Yet this crude and clumsy piece is signed and dated 1783—when Adam and Hepplewhite were flourishing in England, and *le style Louis XVI* in France.

The medieval work, whether of furniture, jewellery or decorative metal objects, showed an intense and close carving or working, always of involved swirls and loops, rather of the style of the Book of Kells. Some of the decoration reached an intricacy that suggested the Indian. It was interesting that this fascination by close swirling patterns carries neatly over into the curves of the Baroque period and invests them with a nervous intensity quite unlike the rich sensuality of southern Baroque.

There is an immense quantity of wall tapestries and cushion covers, some abstract and some representing improving stories from the Scriptures. I must admit that my eye is generally blind to the beauties of tapestry, but, as there were plenty of well-bred and heavily cultured "oohs" and "ahs" in front of them at the private view, perhaps I was wrong in finding them either dull or naive.

CONFUSION IN COLOUR

A small exhibition that seemed to me an object lesson on how not to organize your public relations is at the British Colour Council offices in Portman Square, and features Series 2 of their town and country colours for interior decoration. It goes on until February 13 (so I was told on the 'phone). It is spread over several rooms and a landing; a series of little bays covered with odd bits of fabric, carpet, wallpaper and paintwork. There are no individual captions. The exhibition is thus meaningless; are they showing colours, or different decorating materials, or both? I asked a charming lady, who, instead of answering my question, showed me different types of artificial light shining on different coloured squares of lino. After two lights she left me and began to talk to another member of the staff. I asked for a handout; six sides of foolscap, full of woolly, wordy chat, and not even so obvious a piece of information as the closing date of the exhibition. If you had a day to spare, you could try teaming up the colours mentioned in the blurb with the colours of the actual bits and pieces. I said to another charming lady that I liked the colour of a piece of brocade; which of the new colours was it? But apparently it wasn't a new colour at all. I thought I saw the Mad Hatter step backwards through a mirror into Portman Square, and I followed him, with a severe headache.

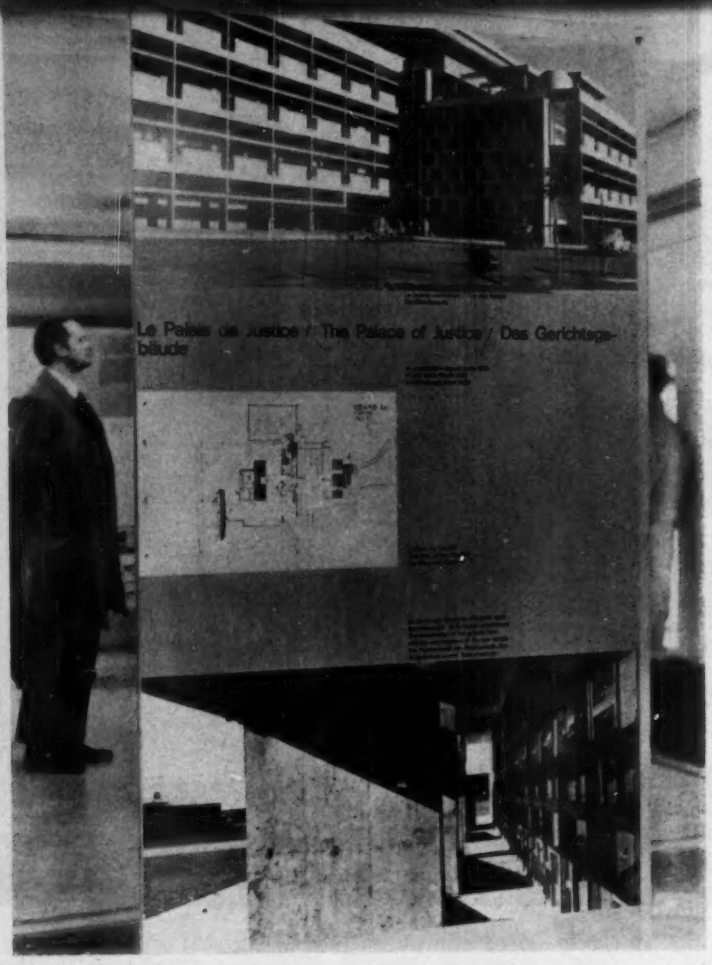
ABNER

LE CORBUSIER EXHIBITION LONDON, 1959

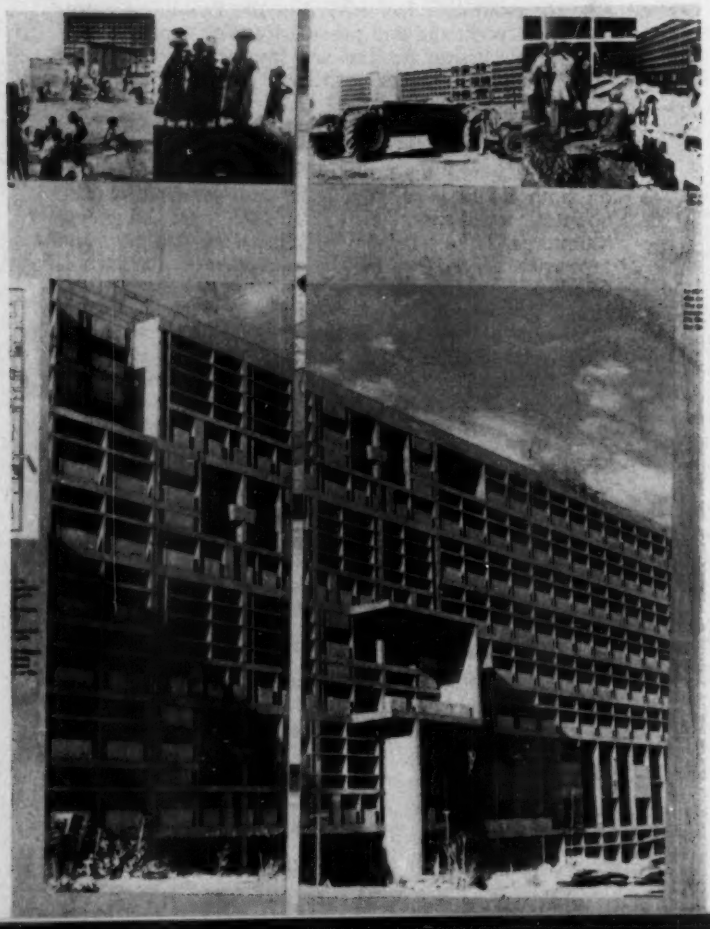
AFTER weeks of anticipation and advance reports, the exhibition has arrived at the Building Centre, from Liverpool, and will provide the high-spot of architectural discussion for the next month. To encourage this a number of talks have been arranged "from the floor".

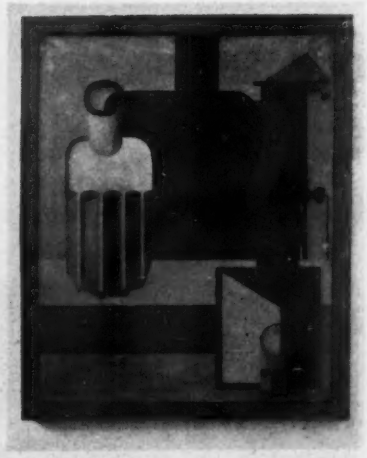
The layout is disappointing. On entering, there is a choice of third floor or basement, the latter being dangerously near the sanitary fittings. The arrangement on both floors is a neat system of panels disported about a central space and interspersed with models and sculptures. The perimeter walls carry the paintings and tapestries. Apart from a lack of sequence, the idea is fine but the surroundings are not adequate to the occasion. Distractions obtrude and a conscious mental discipline is required to pretend they do not exist. Chiswick House, a gallery at the Tate, or the R.I.B.A. would have been more fitting.

The early work is well documented with excellent photographs, and includes the house at Garches and Poissy, which gave stimulus to the modern movement in this country: Lubetkin's Highpoint, Lasdun's Paddington House, Gibberd's Pullman Court and the houses of Connell, Ward and Lucas. These were spirited and convincing enough to influence the spec builder and produced a crop of white-rendered, horizontally windowed houses, a situation to which there is hardly an equivalent today. In the schools, after World War II, the *oeuvre complete* were the standard references for many of the best students and the results are now seen in the work of the L.C.C. at Roehampton, Bentham Road, Loughborough Road, Leslie Creed's flats at Lambeth and the recent buildings of Lyons, Israel and



The Secretariat, Chandigarh

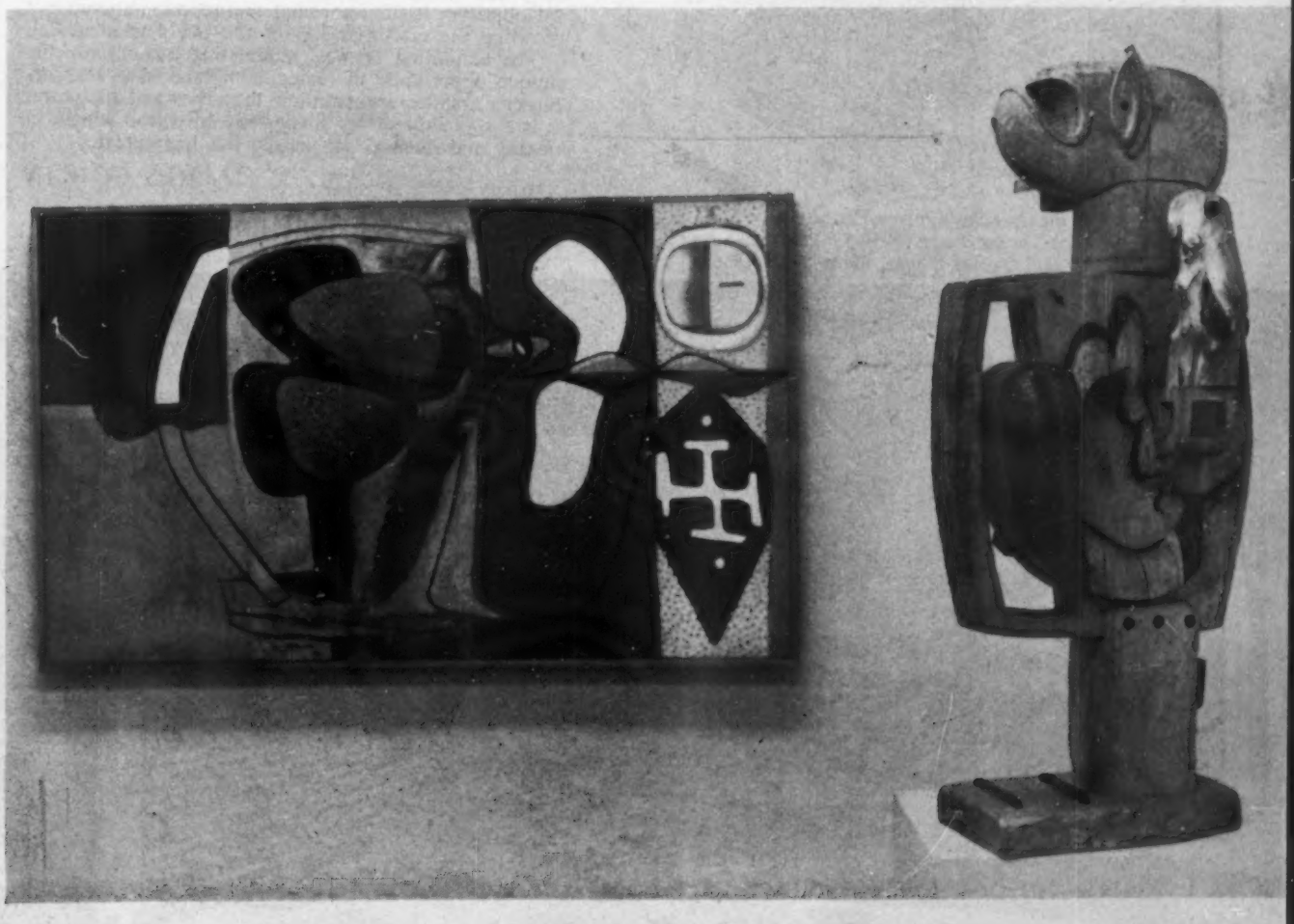


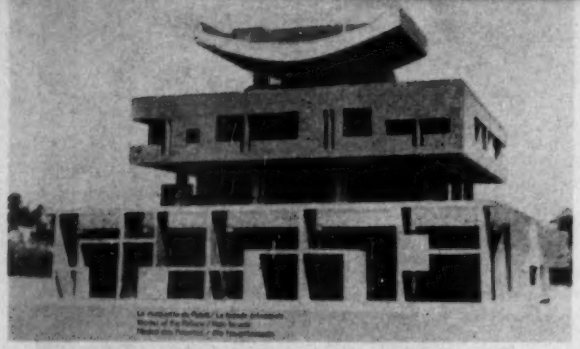


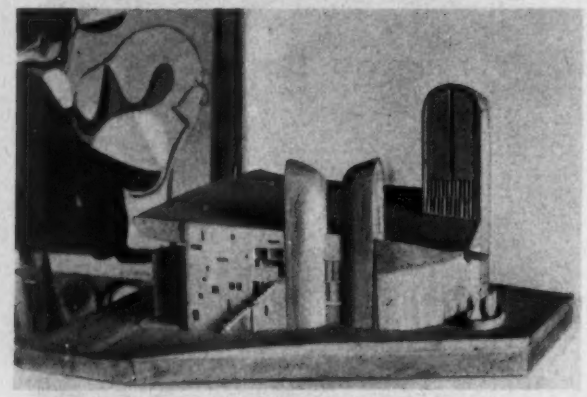
Ellis. But in spite of their magnificence there is a nostalgia about Garches and Poissy for, in the short span of 30 years, they have become both sacrosanct and programmatically anachronistic. The machine architecture of the house did not arrive (in fact it appears to recede), a quiet social revolution intervened and Garches is now, unhappily, divided laterally into flats. The dream that they postulated has faded but an intellectual dignity remains and, as models of study, they have become examples of classic modernism. The paintings of this period which are abstract compilations of "unloaded" objects have the same underlying disciplines and elaborate, architectonically, formal values for future use. As such they have purpose and meaning and are, to me, the most significant.

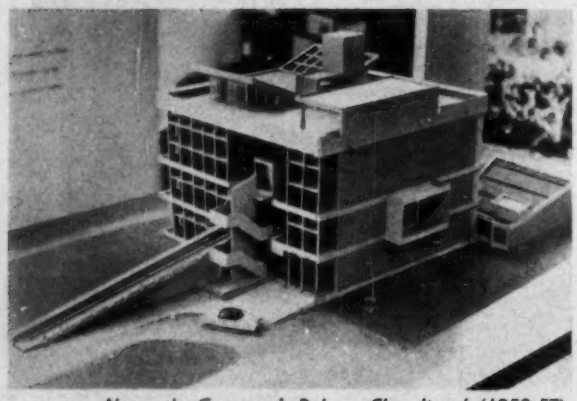
Ronchamp and Jaoul represent the present and we find that the values have changed abruptly. The formulation of universal statements for a new society of high technological attainment has given way to subjective essays in individual problems: intuitive, personal and technically primitive. This has coincided with the reaction to regionalism which reflects the post-war concern about the limitations of international style architects, the failure of the new towns in a visual sense and, with this, the prospect of a scientific Utopia. The influence of Le Corbusier is now much less apparent and architects and students are evolving their personal assessments, often inspired directly by indigenous or fortuitous example. It should be observed that Aalto broke with internationalism much sooner and was establishing a more organic regional architecture before the war.

LE CORBUSIER EXHIBITION









Above, the Governor's Palace, Chandigarh (1950-57), the Chapel at Ronchamp (1950-53), and a club-house for the Mill Owners League, Ahmedabad (1956)

Of the future, and the implications of the Unité, one can only speculate. The premises of the single block concentration in a verdant landscape can hardly be appropriate for all conditions of life; metropolis, city, town and countryside and, one feels, the concept carries overtones of the garden city values where grass and open space are considered morally good in themselves. This is evident in Garniers' project, too, and both probably carry too high a component of reaction against nineteenth-century industrialization. The eventual application may lie in the satellite towns where a formal decision is made to create, in one move, a new living organization and the situation permits a postulate unencumbered by established conditions: existing communications, services, roads, buildings.

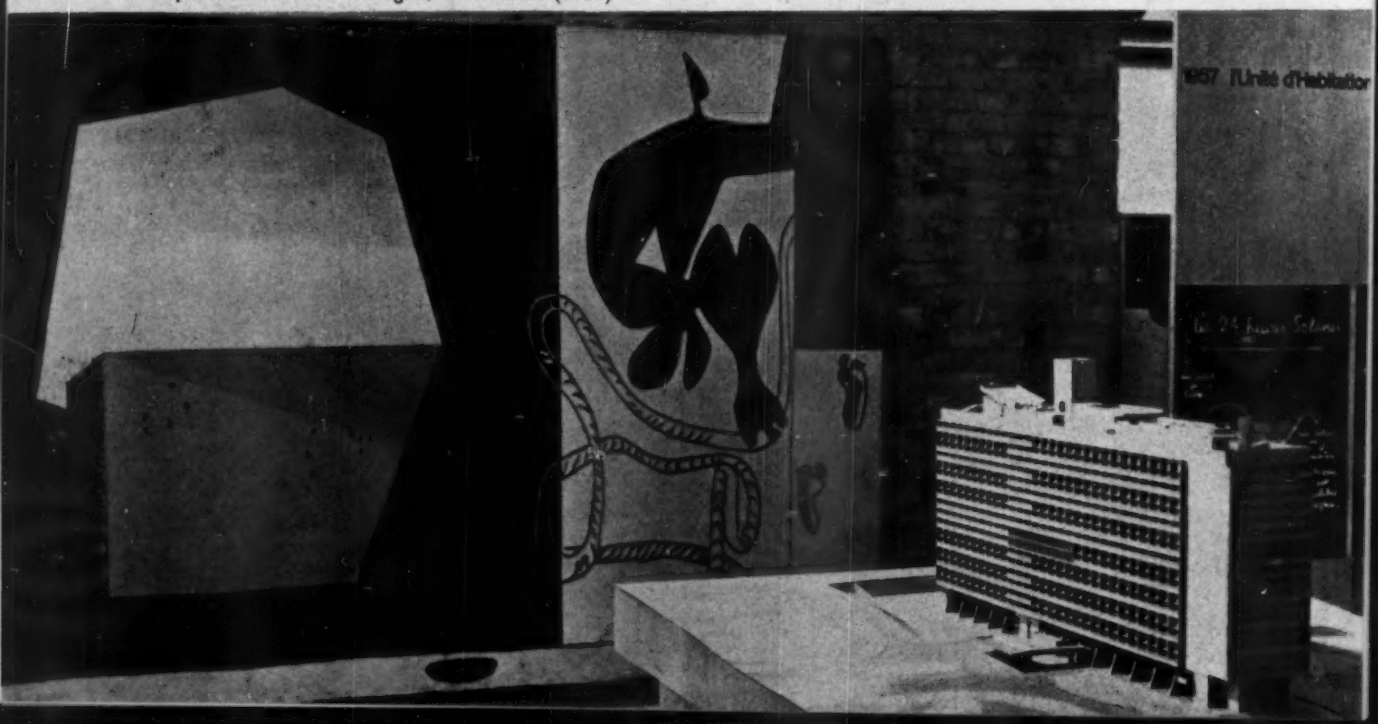
The Voisin plan for Paris underlines the difficulty of the resuscitation of an existing environment. The new system is imposed, in a Haussmann manner, and ignores the established and partially effective organization. One feels, too, that a city should not reiterate the countryside but should present to advantage all that concentration and high density can offer in shared amenities and choice. W. H. Whyte makes the point (and coming from America one is conscious that an idea has now turned a full circle) that the "towers" have deteriorated to architectural cliches and the city now needs an architecture which embraces the heterogeneity.

Finally, mention must also be made of the wooden sculpture, particularly the smallest example which polychromatically organic appears ready to bud at any moment. The Aubusson tapestries are distinguished in colour but painterly in technique and seem to disregard rather than transcend the limitation of the fabric. The focus of the exhibition is the beautiful models, particularly that of the Unité in polished wood. It is a delightful object in itself, somewhat non-representational but recalling the craftsmanship of the old marine model.

The exhibition is most stimulating and affords the unique opportunity of seeing, simultaneously, Le Corbusier's architecture, painting, tapestries and sculpture; it is a summary of his energy and invention which, in quality and fluency, can hardly fail to impress.

JAMES GOWAN

LE CORBUSIER EXHIBITION



Letters to the Editor

New Products

Sir,—As you know, we have been constant subscribers to your journal for a very long time, and I have found your "New Products" column to be extremely valuable.

I am extremely disappointed, however, to read in your issue of January 7 that you are withholding manufacturers' names from the short descriptive articles, and are introducing a further reference through your information service. This, in my opinion, seriously detracts from the value of the "New Products" column, as it introduces one more link in the chain of producing effective action.

The method I adopt in dealing with this column is to make one or two suitable scribbles and pass this out to a chief assistant who, in turn, notifies those other assistants in this office who are primarily interested in current work for which the new product would be of interest.

The essential information which we require in the first instance is the manufacturer's name, and thereafter immediate action can be taken by the man running the specific job. We, like so many architects, have got a very busy and wide field of interest, and therefore any simplicity in obtaining this information is of immediate interest to us.

I hope that you appreciate that we always acknowledge to the manufacturer the source of our information, which we value very much.

Yours, etc.,

G. W. BOWES, DIP.ARCH., A.R.I.B.A.

T. P. Bennett & Son.

We are grateful to this subscriber for taking the trouble to express his firm's point of view. Readers will note that manufacturers' names and addresses have been added to the descriptive notes in this week's "New Products" as well as the information references. That will be the format in future issues. We can still provide further information for readers who require it if they will mark the appropriate reference on the form printed on the last page of each number.—Editor.

The Co-op Goes Contemporary

Sir,—The report appearing in your issue of December 24, 1958, under the heading "The Co-op Goes Contemporary" contains a great many gratifying remarks up to the sentence "The Co-op should find that their Universe Range will be greatly popular".

Alas, the second part of your report is full of criticism. It would be greedy to take your bouquets without the brickbats, and I accept without a murmur that your reviewer dislikes some of my designs on personal, aesthetic grounds. But when he states that my general style is a little "too contemporary", "in the wrong sense"—and suspects that I may have been forced into this by the sales people—I think I must make my position clear, in all fairness to the rest of the team of the C.W.S.

As consulting designer I cannot escape the responsibility for the general style of all pieces (with the exception of the easy chairs and settees) and I was not in any way forced to "design down" to a level of working-class contemporary". There is no room for such a style. Conversely, I am not in any way interested in pandering to a snob market either. I do not intend to make my designs "exclusive" to any class.

If you care to re-examine my designs very critically you will probably discover that most of the large structures (storage fitments, etc.) have been designed on an architectural grid, because I feel that all major furniture should be subject to architectural co-ordination (both myself and my assistant, Frank Watkins, have started a life of product design by becoming architects first). This fact may account for some peculiar differences between the Universe Range and most of the furniture which has been designed by the furniture trade. The range is much more ample in Universe in the case of units that can be arranged to suit varying floor plans. Conversely, I have resisted the idea to design some useless items just because the typical furniture "suite" always has them (certain kinds of tallboys are a case in point).

In trying to devise clean-limbed and cleanly unitized furniture suitable for mass production, I am afraid I have to take a fairly independent view of fashion trends as well. I am fully aware of this year's swing towards paler colours, weaker contrasts, in some sectors of the interior design field, and since furniture, such as the Universe Range, has to endure a good many years, it stands to reason that we cannot follow topical trends too closely and too literally. I am very glad I did not do so in other designs of mine a few years back, when the interior decorators went all mad with the forced gaiety and courage borrowed from the décor of the fairground.

I am very grateful to your reviewer, first of all for taking the trouble to analyse the Universe Range, and, secondly, for his encouraging remarks, and I hope that my answer above may to some extent deal with the points of his criticism.

Yours, etc.,

GEORGE FEJER.

The Late Felix Samuely

Sir,—As one of the many architects who has worked in the warm sunshine of Felix Samuely's collaboration, may I add a personal tribute.

It was not only the brilliant engineer we admired, but the man we loved; not only the inexhaustible flow of his ideas, but his great human kindness, his modesty and simplicity. The unique experience of working with a genius, on terms which he made you feel were equal, seems like something that could never be repeated.

Working with Felix Samuely one was always conscious of design in its most comprehensive and deepest sense. As a result the architectural content of one's work was improved just as much as, if not more than, would have been the case had one been working with an equally brilliant architectural colleague.

Felix Samuely has gone, but his ideas and the ideas he helped to inspire in others, particularly architects, will live to enlighten British architecture for a very long time.

Yours, etc.,

GEORGE GRENFELL BAINES.

Graduated Subscriptions for R.I.B.A.

Sir,—Mr. Michael Pattrick's letter, published in A. & B.N., January 21, 1959, cannot be accepted without comment. You will recall that Mr. Pattrick suggested that R.I.B.A. subscriptions be related to age and that an architect at 40 years of age should be liable for an annual subscription of 15 guineas.

Surely Mr. Pattrick is not so naive as to suggest that an architect at this age is necessarily more liable to finance the R.I.B.A. than his younger brethren. Without doubt the majority of architects in the 40-50 age group, with growing families to support and with other incumbent commitments, are at a period in their lives when maximum liabilities are paramount.

Mr. Pattrick must also be aware that at the same A.A. meeting at which he originally made his proposals, Mr. Richard Sheppard expounded the very reasoned forecast that, by 1975, the average 40-year-old architect would be fortunate to receive a salary in the region of £1,000 per annum. It is doubtful whether this figure can be greatly exceeded at the present time.

Surely the subscriptions should be relative to the benefits received by R.I.B.A. membership and as these benefits can be equally enjoyed by all full members, it is doubtful whether a case can be made out for graduated subscription in any shape or form.

Yours, etc.,

THREE SALARIED ARCHITECTS.

NEWS

Appointment

The Imperial College of Science and Technology has appointed Miss Sylvia Crowe, president of the Institute of Landscape Architects, as landscape consultant in connection with the development of the college's central site in South Kensington.

St. Paul's Precincts Decision

The Minister of Housing and Local Government, Mr. Henry Brooke, has dismissed an appeal by the Church Commissioners to develop a site north of St. Paul's Cathedral for offices, showrooms and shops but has invited them to submit a fresh application.

The site, which is bounded by Newgate Street, Warwick Lane, Paternoster Row, and Panyer Alley, is part of the area included in Sir William Holford's plan for the redevelopment of the precincts of St. Paul's. Sir William's proposals included the tower block, some 260ft high to the north-west of the cathedral, but the Minister thought this would interfere with important views of the cathedral. The revised scheme, just rejected, proposed twin towers, of 175ft and 165ft, in place of the single high tower. Both the Common Council and London County Council objected to these and the Commissioners then offered to put forward an amended scheme for a single tower block standing some 204ft high above the pavement to Newgate Street. This would involve a loss of some 27,000 sq ft in floor space.

The Minister indicated that he would be prepared to approve a new application on these lines. He thought a single tower of the kind now suggested would relate in scale with other buildings on the site much better than the higher and bulkier block originally proposed, and would not have a serious effect on distant views of the tower of the cathedral. The Commissioners are also to make other amendments to bring the scheme closer into line with the original Holford plan.

The Association of Official Architects

The body known as the Local Government Architects' Society officially became the Association of Official Architects on Saturday, January 31, at a general meeting. The association's official address is 66 Portland Place, London, W.1.

At the meeting a message was read from the president of the R.I.B.A. wishing the association every success, and Mr. Ricketts, assistant secretary, R.I.B.A., said he thought that the R.I.B.A. could give a great deal of help to the association, although he did not know what tangible form this would take. There was an attendance of 90, of whom 60 were delegates, representing 92 offices.

It was decided that the objects of the association should be to improve the conditions and protect the interests of the association's members; to regulate the relations between such members and their employers; and to act from time to time as necessary to elevate their status and advance their interests within their profession. In discussion, members did not feel that this also implied good architecture, and it was therefore decided to add a rider to emphasize that the objects of the association should also include the promotion of good architecture and the finest service to the public.

A certain amount of discussion was aroused by Section C of the draft constitution which read: "The association shall be a certificated Trade Union under the Trade Union Acts, 1871-1940." Kent County Council put up an amendment asking the reason for this and requesting that no decision be made. Mr. C. F. Kimm said that there had been three courses open to the association: they could have been registered under the Company's Act; registered as a trade union; or certified as a trade union. The latter, with the least obligations, gave them a status for negotiation, and there was no sort of political tie-up.

It was agreed that membership should be open to all registered architects and chartered members of the R.I.B.A. who are employed in local government, new towns, the health service, the nationalized industries, the public utilities and such other forms of employment as may be designated from time to time by the general council. Three amendments sought the admission of students; the exclusion of chief officers and deputy chief officers (one of the reasons being that their presence might embarrass discussion); and the admission of all salaried architects. All were rejected.

The constitution of the general council to govern the association was generally agreed on a national and regional basis. Scotland wanted their six regions represented (in contrast to their representation of four on the R.I.B.A. Council); this idea was rejected. Scotland also asked for a separate sub-committee to deal with matters which were of purely Scottish concern.

The Columbia Theatre, Shaftesbury Avenue, which was opened on February 4. Architects: Sir John Burnett, Tate & Partners

Churchill College Competition

Twenty of the twenty-one firms of architects invited to submit designs for Churchill College, Cambridge, have accepted the invitation. The firms invited were: Architects' Co-Partnership; Sir Hugh Casson & Neville Conder; Chamberlin, Powell & Bon; Yorke, Rosenberg & Mardall; David du R. Aberdeen & Partners; Fry, Drew, Drake & Lasdun; Frederick Gibberd; Erno Goldfinger; William Howell, D.F.C.; E. D. Lyons, L. Israel & T. B. H. Ellis; Robert Matthew & Johnson-Marshall; Powell & Moya; David Wyn Roberts; Richard Sheppard, Robson & Partners; James Stirling & James Gowan; Tayler & Green; Alison & Peter Smithson; The Hon. Lionel Brett; Norman & Dawbarn; H. T. Cadbury-Brown; and James Cubitt & Partners.

At the first stage of the competition, which closes on April 13, outline sketches to a scale of 1/32 are required. Four of the entrants will be invited to proceed, and will receive a premium of £500. The trustees of the college propose to appoint the designer of the winning scheme as architect for the work, but should they not approve the winning design it will be open to them to reject it on paying an appropriate fee to the architect. The usual competition rules as to anonymity will be followed.

The assessors are: Sir John Cockcroft, Master of the College; Mr. Noel Annan, Provost of King's; Mr. Basil Spence, A.R.A., P.R.I.B.A.; Sir William Holford, F.R.I.B.A.; and Sir Leslie Martin, F.R.I.B.A.

The site for the new Churchill College is in Madingley Road, Cambridge.

R.I.B.A. PRIZES AND STUDENTSHIPS, 1959

Points from E. D. Mills' Criticism

THE two major design prizes for this year—the R.I.B.A. Intermediate Design Prize and the Victory Scholarship—had failed to produce any outstanding work, said Mr. Mills. Many of the submissions, particularly for the Victory Scholarship, were handicapped by incomplete drawings, poor presentation, and a general carelessness in planning and detail.

The entries, with a few notable exceptions, were scanty and poor and he was astonished that nobody seemed to want these considerable sums of money. He had been asked to report to the Board of Architectural Education on the results and he would try to suggest ways in which the appeal of the prizes could be widened, but the ultimate responsibility rested with the competitors.

One of the features which concerned him particularly was the way in which competitors often ignored the published conditions, or failed to study them sufficiently. The requirements of the juries were all set out quite clearly in the official pamphlet, and there was no excuse for failing to observe clearly specified conditions.

R.I.B.A. Intermediate Design Prize. Ten of the 275 candidates were allowed to proceed; "Bonzo" and "Odds-On" were joint prize winners. The subject was "a small riding establishment with covered school". "Bonzo" had presented an excellent set of drawings which would repay careful study by the unsuccessful candidates. Two points prevented him from winning the prize outright: first, the detailed planning was in many cases too tight; second, he had departed from his *esquisse* and the programme by providing a riding hall which was not enclosed. "Odds-On" also presented an attractive set of drawings, with particularly well-developed sketches showing a group of buildings with good architectural character. His plan was good and workable and the structure would stand—unlike some suggested by other competitors.

The other eight schemes all possessed major faults that put them out of the running, the most common of which were inconsistency in character, poor planning and layout, doubtful structural design, and scrappy or inadequate presentation.

The Victory Scholarship. Ten of the 132 candidates were allowed to proceed. The subject, "pleasure pavilions in Richmond Park, near London", should have produced very much better results. The scholarship was not awarded. Three certificates of honourable mention were given to "Vaasa", "Nobism" and "Allilo".

With more care "Allilo" could have won the prize. On the very fine parkland site he had quite rightly allowed the park to dominate the buildings with an informal layout of simple buildings linked by covered ways. But his drawings were incomplete and his presentation inadequate and careless. He gave no indication of how his linking covered ways were supported. His restaurant could have been nearer to the lake.

The design by "Vaasa" was over elaborate, the scale of his buildings was too big, and his layout was too formal for Richmond Park. In wet weather the walk from car park to pavilions would be too long and his bandstand was too isolated. The view from the restaurant was dull and took little account of the natural beauty of the park. Detailed planning of the various buildings was well thought out. His drawings were almost unreadable—practically no colour had been used. "Nobism" got a mention, largely, Mr. Mills felt, for his presentation. The buildings were poorly designed, clumsy in detail and harsh in outline. His layout was uninteresting but he had given thought to traffic circulation problems.

Faults pointed out in other schemes included: failure to use the site properly; pretentiousness; dull drawings; a Granada cinema plan instead of a Greek theatre; buildings too formal; and lack of understanding of the concrete construction suggested.

Silver Medal for Measured Drawings. Only three entries. "Arch", the winner, submitted a set of beautifully drawn sheets, and the jury highly commended his work. The work of "Aslahk" was inadequately drawn—his freehand being particularly poor. "Echinus" presented beautifully drawn sheets, but these were lacking in character, too mechanical and repetitive, a fragmentary study giving no clear picture of a building.

Owen Jones Studentship. There were four entries for this study of the application of colour as a means of architectural expression. "Laplander", the winner, was competent but unemotional, sensitive but lacking in sparkle, had not much understanding of light and shade in colour in his sketches, notwithstanding a good line. "Drake" produced insufficient work. His entry was "vigourous but vulgar" and the jury advised him to try again. "Till's" work was immature, neat but feeble; "Decori's" enthusiastic but muddy and confused.

Silver Medal for an Essay. The 11 essays submitted were of low standard and the jury only reluctantly decided to make an award. The essays gave an impression of student theses rather than worthy pieces of writing in essay form. The essay by "Verbascum" on "The Architecture of Environment" was a philosophic essay of some imaginative power. The author demolished effectively several current town-planning theories thereby providing material for stimulating thought. "Revival" received an honourable mention for "The Architecture of W. H. Lethaby", not for success as an essay, but because many useful facts were brought together.

Arthur Cates Prize. The sole applicant failed to comply with the published conditions.

Alfred Bossom Research Fellowship. There were eight applicants. The winner, G. E. Mitchell, an experienced research worker, would visit the States to study the architectural implications of fast motorways.

Rose Shipman Studentship Trust. There was a record field of 18 applicants. The winner, H. L. Gloag, would go to the States to study "The Lighting of Windowless Buildings". Mr. Mills hoped Mr. Gloag would look into the economic aspects of the problem.

Mr. Mills added that in spite of the good standard of entries and the excellent choice made by the juries for these two awards they had asked him to comment on the type of application which stood the greatest chance of success. For future entries the following hints should be of value:

First, applicants must understand the field they propose to study and explain their intentions clearly.

Secondly, intended research must be original and not merely finding out what other people are doing.

Thirdly, the work must be capable of being carried out by one man in the time specified and not require the services of a B.R.S. team for five years.

Henry Saxon Snell and Theakston Bequest (for the study of hospital design). There were two entries, both of very high standard. The winner was W. J. Jobson.

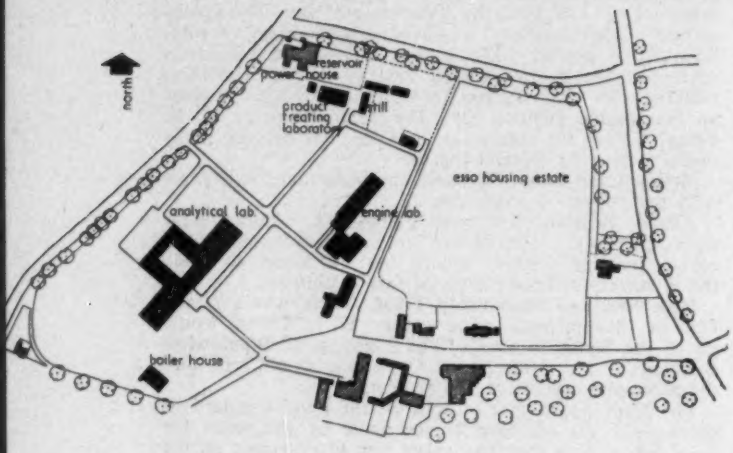
Hunt Bursary (for the study of housing and town planning). Neither of the two entries merited an award.

Neal Bursary. The only entrant, Mr. R. B. Wood-Jones, submitted a remarkable portfolio of 56 sheets of measured drawings with maps and diagrams devoted to the lesser historial architecture of the Banbury region up to the end of the eighteenth century. A most valuable contribution. The jury approved his plan for a similar survey of West Suffolk, and suggested that he might include a more detailed record of construction and decoration as an aid to sympathetic restoration.

Public and Secondary Schools' Prize. None reached the required standard.

London Association of Master Stonemasons' Prize. This specifically called for a study of natural stone in modern buildings. The historic entry was eliminated and two consolation prizes were awarded.

End of the laboratories from south-west, with the administration wings joining at right-angles



ESSO RESEARCH CENTRE

Architects: LANCHESTER AND LODGE

Structural Engineers:
R. TRAVERS MORGAN & PARTNERS

Quantity Surveyors:
WAKEMAN, TROWER & PARTNERS

Front of laboratories and conference room

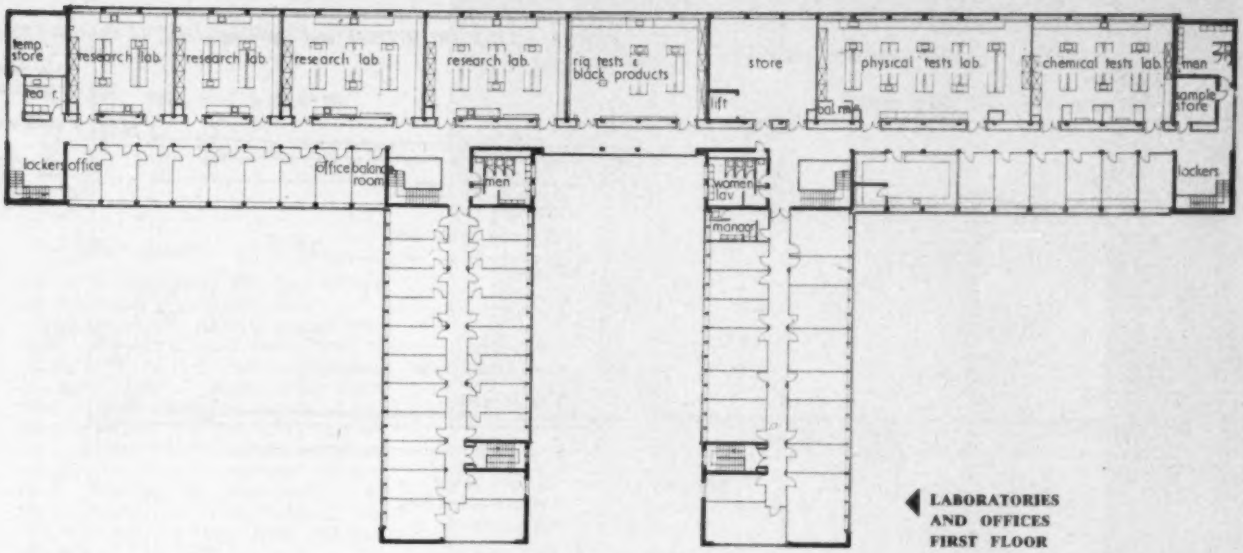
THESE new research laboratories for Esso Research Ltd. are situated on the Esso Petroleum Company's site at Steventon, Abingdon. Three separate buildings are provided, containing research laboratories and offices, engine test laboratories and boiler house.

Research Laboratories

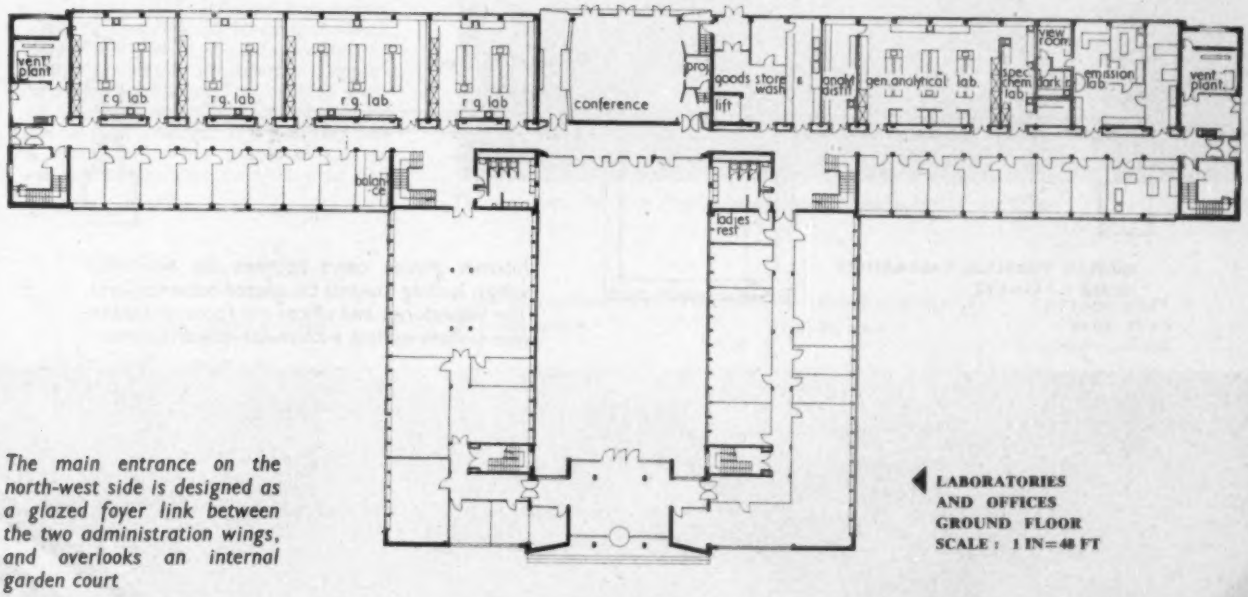
This is a two-storey building, comprising laboratories, offices, library and conference room. The laboratory block is on a north-east/south-east axis of the site and is joined at right-angles by two office wings in the centre, which are separated by a garden court and linked by the main entrance hall at the opposite end.

The main block is 343ft long with laboratories 28ft deep, and writing rooms and laboratory ancillaries 16ft deep with a central corridor between them. Principal staircases and lavatories are situated at the junctions with the office wings. The office wings

[*Continued on page 187*

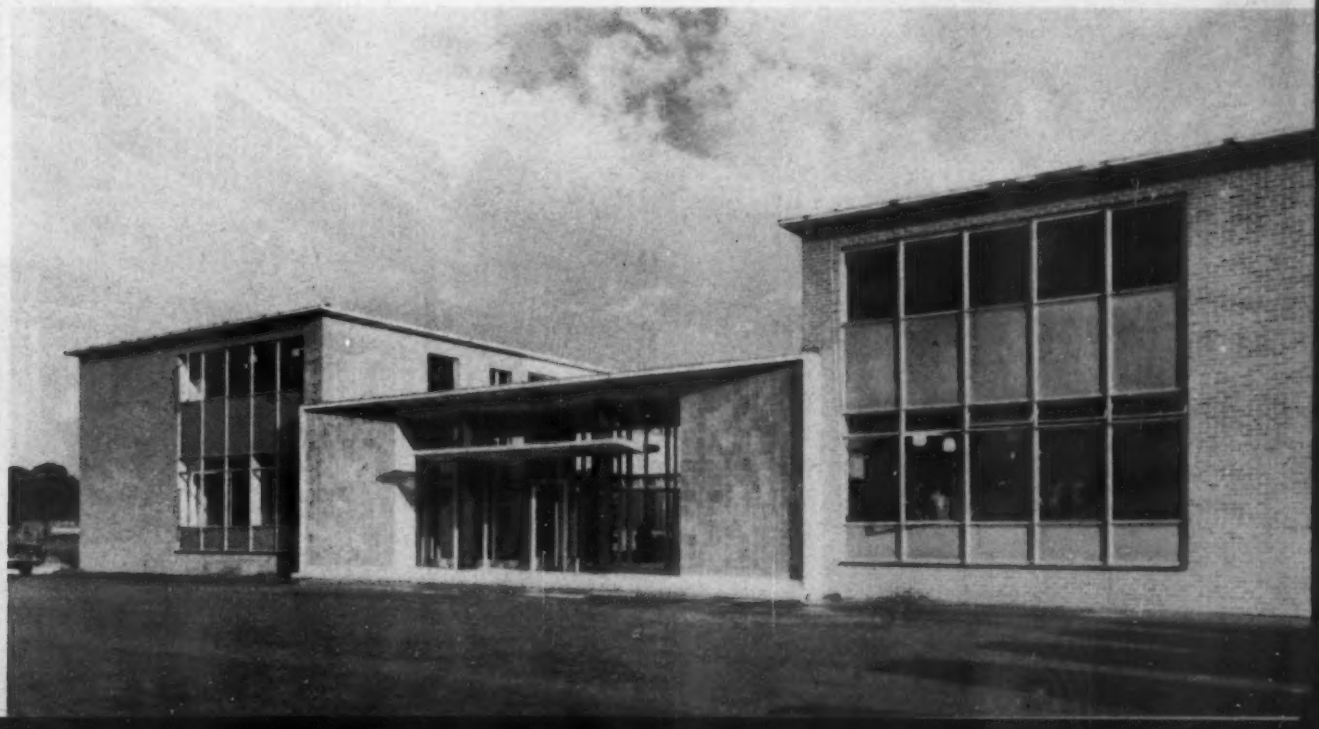


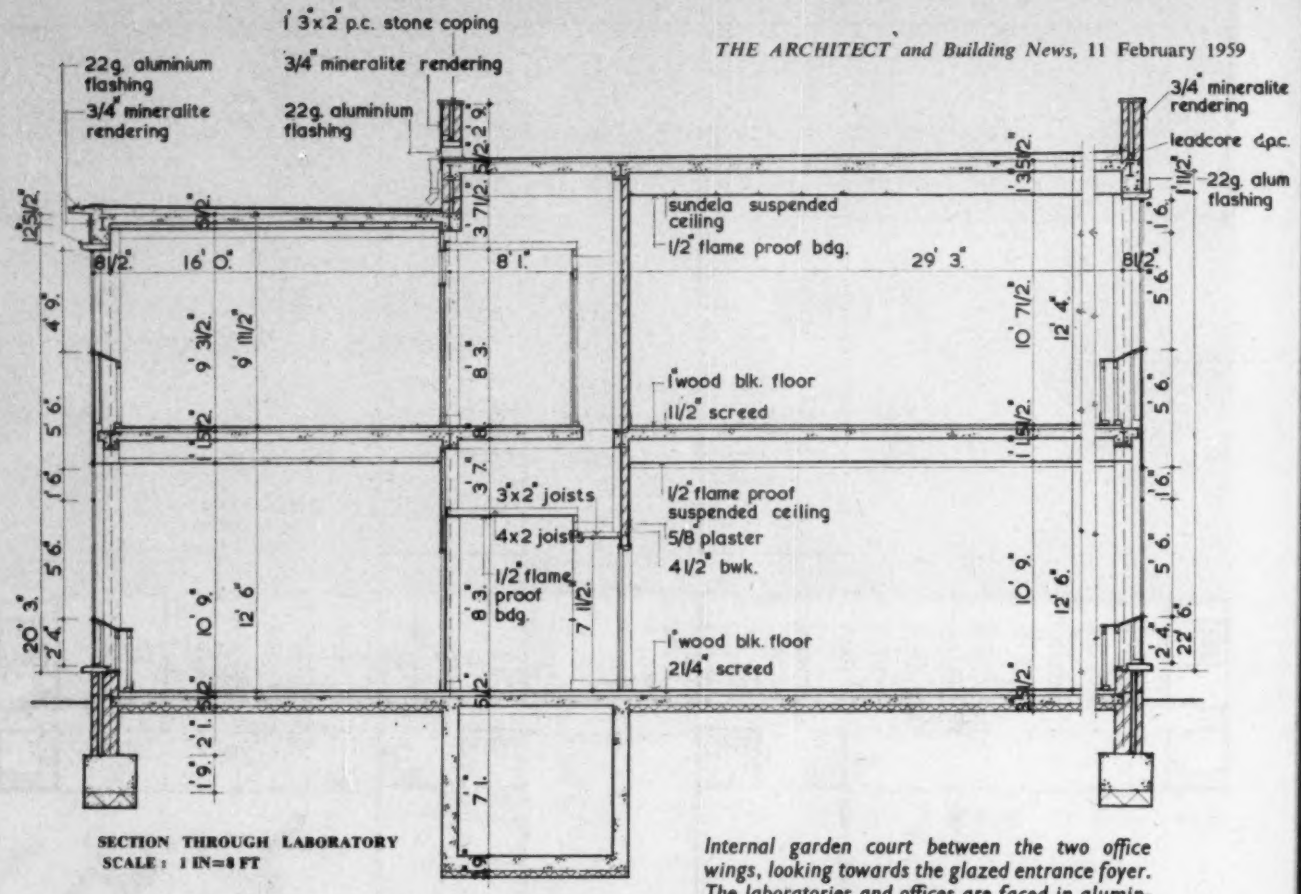
LABORATORIES AND OFFICES FIRST FLOOR



LABORATORIES AND OFFICES GROUND FLOOR SCALE : 1 IN=48 FT

The main entrance on the north-west side is designed as a glazed foyer link between the two administration wings, and overlooks an internal garden court





SECTION THROUGH LABORATORY
SCALE: 1 IN=8 FT

Internal garden court between the two office wings, looking towards the glazed entrance foyer. The laboratories and offices are faced in aluminium curtain walling with metal spandril panels

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11 February 1959

ESSO RESEARCH CENTRE

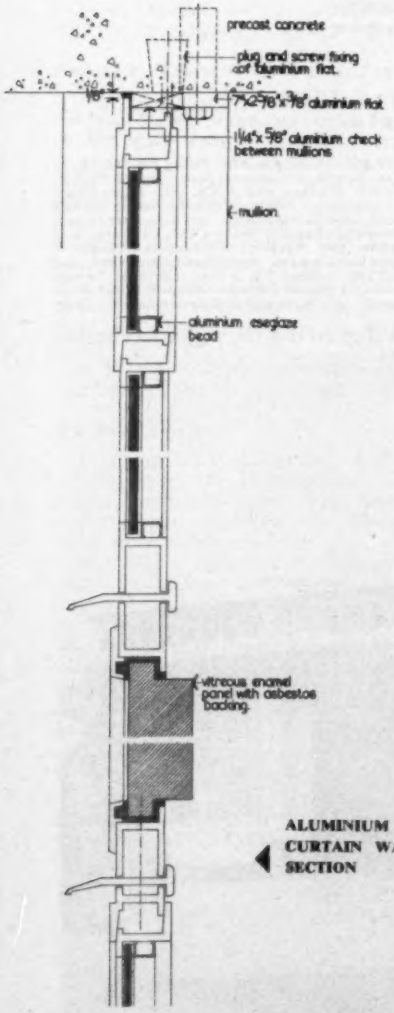
Continued from page 184

are 92ft long, with 18ft deep offices on either side of the corridor.

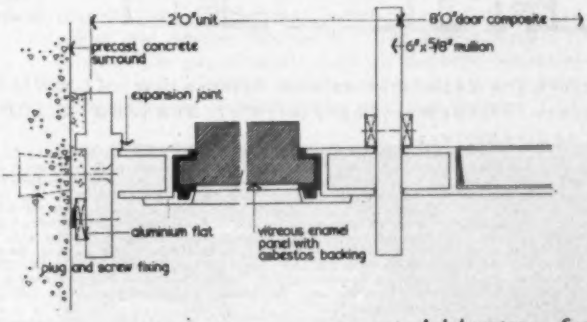
The conference room is placed centrally on the ground floor and is constructed so that future extension can take place. A main service duct runs on both floors the length of the laboratories on the laboratory side of the corridor and contains vertical service risers and horizontal extract ducts. The general floor heights in the building are 12ft, reduced to 10ft 6in for the first floor of the offices.

The structure is steel framework on a 10ft grid in the laboratory block and a 4ft grid in the office wings, to allow maximum flexibility in apportioning the offices. The central stanchions of the office wing, however, are at 16ft centres. The building has a flat roof with projecting eaves on the offices and parapet over the

The spacious entrance foyer. Reception is at each end of the foyer



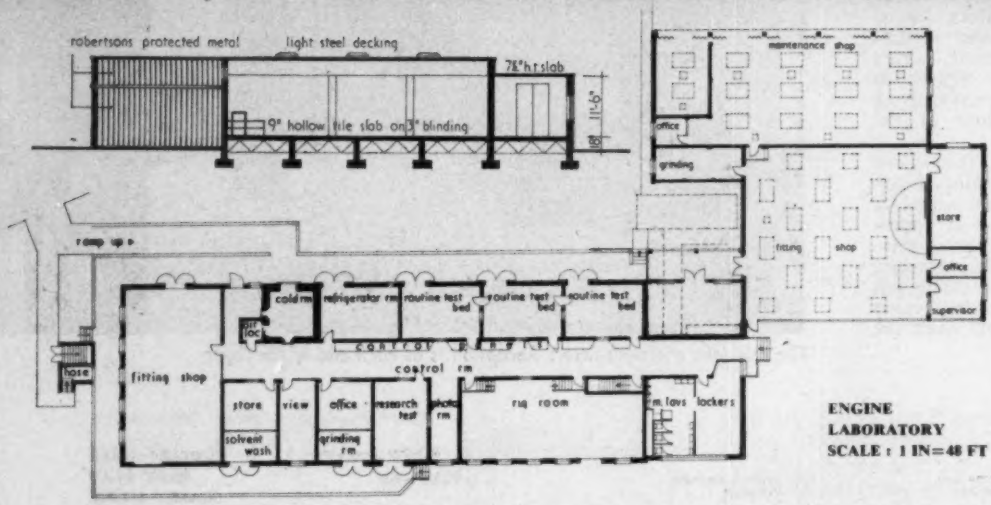
ALUMINIUM CURTAIN WALL SECTION



CURTAIN WALL PART PLAN SCALE: 1/4 F.S.

A laboratory. Services are run in the false ceiling from a duct in the corridor

The engine test laboratory, for experimental work on engine lubricants. The maintenance and fitting shops are on the right

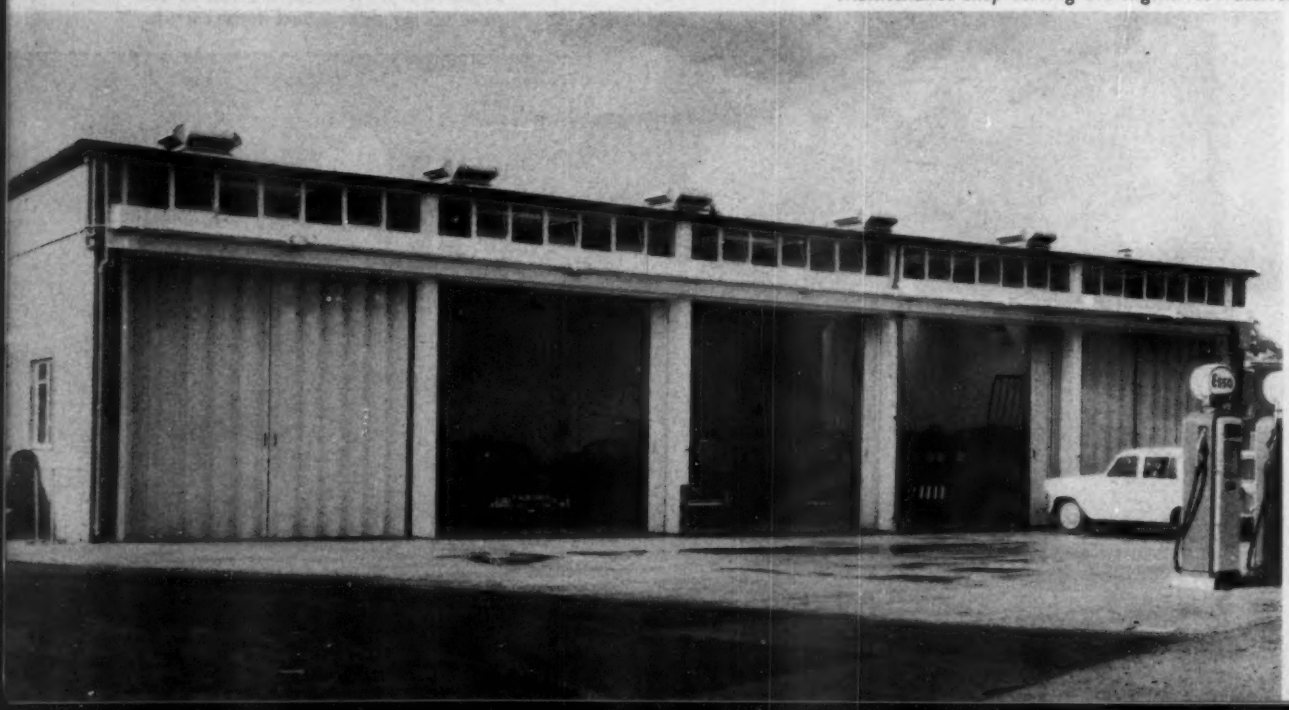


ENGINE LABORATORY
SCALE : 1 IN=48 FT

General Contractors for Laboratories and Offices: W. E. CHIVERS & SONS LTD.
General Contractors for Engine Laboratory: J. GERRARD & SONS LTD.

Sub-contractors and suppliers:
Acoustic Tiles: Burgess Products Co. Ltd. *Aluminium Curtain Walling and Windows:* The Crittall Manufacturing Co. Ltd. *Asphalt:* Ragusa Asphalte Paving Co. Ltd. *Boiler House Flue:* R. B. Hilton Ltd. *Chequer Plates and Steel Staircase:* Beech & Partners. *Cork Flooring:* S. H. Ware & Co. Ltd. *Curtains to Conference Room:* Maple & Co. Ltd. *Decorative Panels:* Plyglass Ltd. *Duct Covers, etc.:* Broads Manufacturing Co. Ltd. *Electrical and Mechanical Services:* Matthew Hall & Co. Ltd. *Facing Bricks:* Pratt (Watford) Ltd. *Fire Fighting Equipment:* The Walter Kidde Co. Ltd. *Flush Doors:* Samuel Elliott & Sons Ltd. *Framework on Pilot Plant Benches:* Sankey Sheldon Ltd. *Glass Brick Windows and Roof Lights:* Lenscrete Ltd. *Goods Lift:* Express Lift Co. Ltd. *Ironmongery:* Stedall & Co. Ltd.; Neville Watts & Co. Ltd. *Laboratory Fittings:* Sotos Ltd. *Laboratory Taps and Sinks:* J. Bolding & Sons Ltd. *Lattice Girders to Boiler House:* Sommerfelds Ltd. *Mineralite:* Kendells Flooring Ltd. *Mineralite Faced Concrete Copings:* Cooper Wettern & Co. Ltd. *Partitions:* Unilock Partitions Ltd.; Firmin & Collins Ltd. *Quarzite:* John Stubbs Ltd. *Refrigeration Equipment:* Pressed Steel Co. Ltd. *Revolving Doors:* H. H. Martyn & Co. Ltd. *Roller Shutters:* Dennison Kett & Co. Ltd. *Roof Lights:* Lenscrete Ltd. *Roof Screeds:* Celcon Ltd. *Roof Slabs:* The Kleine Co. Ltd. *Ruboleum:* Inlaid Rubolin Flooring Co. Ltd. *Sanitary Fittings:* Stephenson & Co. (Oxford) Ltd. *Sindanyo Tops to Fume Cupboards:* Turners Asbestos Cement Co. Ltd. *Slate Bench Tops:* Bow Slate & Enamel Co. Ltd. *Steelwork to Boiler House:* Beech & Partners. *Structural Steelwork:* Redpath Brown & Co. Ltd. *Suspended Ceilings and Acoustic Tiles:* Sundeala Board Co. Ltd. *Tarmacadam:* Amey's Asphalte Co. Ltd. *Terrazzo:* Art Pavements & Decorations Ltd. *Tiling:* A. H. Herbert & Co. Ltd. *Wood Block Flooring:* Vigers Bros. Ltd.

Maintenance shop serving the engine laboratories



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ESSO RESEARCH CENTRE

laboratories to conceal the extract housings and protect personnel.

Externally, the majority of the building is faced with aluminium glazed curtain walling with coloured stove enamelled metal panels below the sills of the windows. The flank walls are in facing brick and parapets and surrounds to the curtain walling are in pre-cast or rendered Mineralite.

All laboratories have mechanical air intakes, extraction being by the fume cupboards, and the main intake ventilation trunking being run above the false ceilings of the corridors to the plant rooms at either end of the laboratory block at ground floor level.

The heating is by hot water convection heaters, and supply pipes run between the external structure and columns and the curtain walling.

Flooring in the laboratories is hardwood block, and Ruboleum in the offices and corridors.

Lightweight partitions separate the various offices, and these are glazed in many instances on the corridor side with double glazing to special rooms.

Engine Test Laboratories

This single-storey building contains test-bed fitting shops on either side of the main control corridor. There is external access to each of the test beds to the walk-way, with ramps from ground level for delivery of heavy plant. A service corridor at basement has pipes which lead direct into the lower portion of the test beds. The test-bed rooms are lit by double-glazed bricks externally at clerestory level and are lined with acoustic metal panels above the tiled dado. Construction is load-bearing brickwork and reinforced concrete hollow-tile roof.

Boiler House

This contains oil-fuelled boilers which serve the laboratories and engine test laboratory. The boiler house is also used for experimental work on domestic boilers.

The roof is light steel decking supported on lattice girders. The main flue and wall behind the boilers are in brickwork. Asbestos cladding is used on the experimental boiler side, which can be readily pierced for flues where required. Curtain walling at one end permits the boiler house to be extended.

Cost

Approximate cost of the main building and boiler house was £356,000, and £113,000 for the engine laboratory.

Exterior and interior views of the boiler house. The boilers are oil-fired and serve the laboratories, offices and engine laboratory. The boiler house is also used for experimental work on domestic boilers, and one wall is clad in asbestos to permit piercing for flues. The roof is steel decking on lattice girders

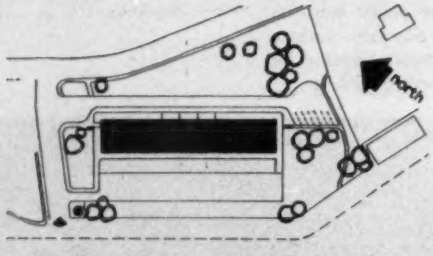
The north-east elevation and main entrance to the offices at upper ground-floor level. The building is clad principally in aluminium curtain walling, with end panels of brickwork to avoid too metallic an appearance and to provide wind bracing

OFFICE BUILDING, MONMOUTHSHIRE

Architect: FRANK SCARLETT

Consulting Engineers:
REINFORCED CONCRETE STEEL CO. LTD.

Quantity Surveyors: GLEEDS



The offices complement existing rolling mills and extrusion works

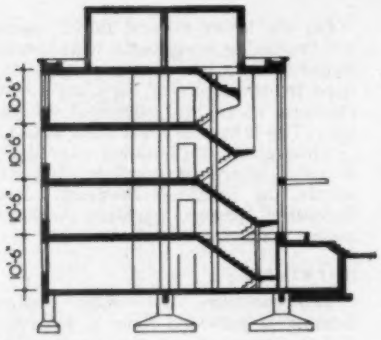
THIS new office block at Rogerstone, Monmouthshire, was required by Northern Aluminium Co. Ltd. to complement their existing rolling mills and extrusion works. Previously, the offices were dispersed among several buildings over the site, but are now centralized in one building.

Site

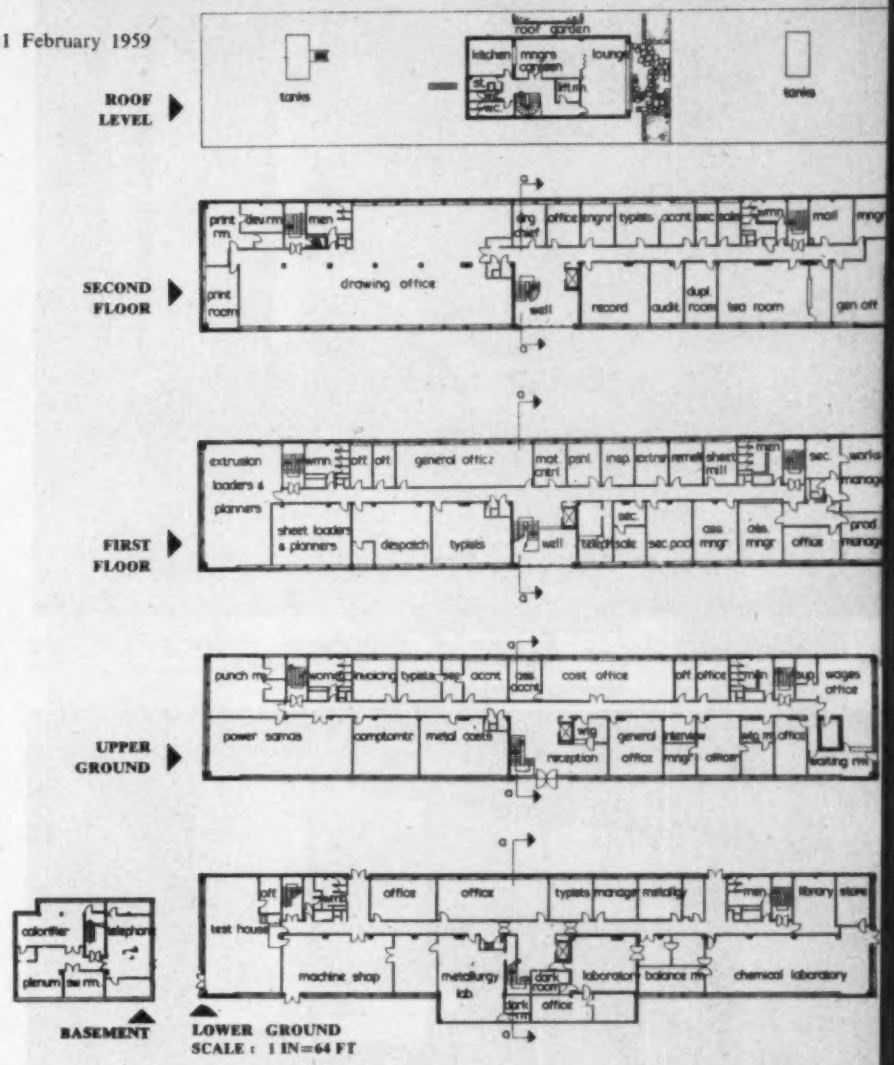
A 10ft slope in the site has been utilized to provide an upper ground floor approximately level with the public road, at which the main entrance to the offices is placed, and a lower ground floor containing those departments which require direct access to the existing works.

Planning

The accommodation is contained within a rectangular block, 250ft by 45ft and four-storeys in height. In addition, a superstructure houses the managers' canteen and lounge at roof level, and a small basement contains



CROSS SECTION
SCALE : 1 IN=32 FT



calorifiers and electrical equipment. The laboratories and test house are at lower ground floor on the same level as the existing works. Accounts and wages are at upper ground level, general offices at first floor, and the drawing office at second floor. Staircases are located centrally and at both ends of the building. Lavatories are arranged in stacks adjacent to the staircases, with vertical ducts for services, drainage and ventilation.

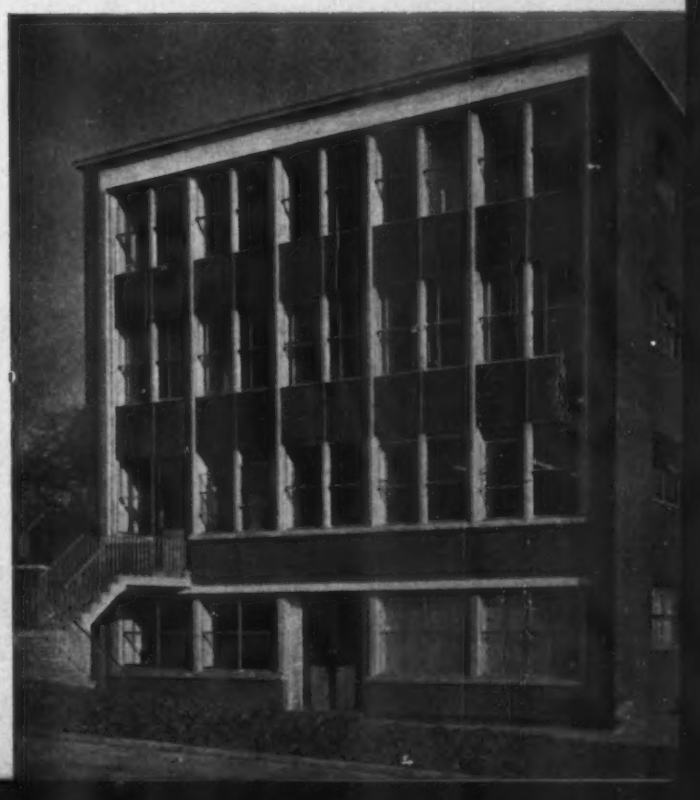
Construction

The building has been designed as a series of bays, 25ft by 25ft, subdivided on a module of 4ft 2in. The framework is of pre-cast reinforced concrete columns at 8ft 4in centres, connected by a perimeter beam at each floor level. The central line of columns is cast *in situ* and spaced at 16ft 8in centres. The structural floors are of pre-cast prestressed units. Level soffits, without visible beams in the ceiling, allow absolutely free arrangement of internal partitions.

The principal facing material is aluminium curtain walling, consisting of continuous composite units 8ft 4in in width (corresponding with the structural columns), made up of the following elements: 1, Two double hung sash windows, each 4ft wide, fitting between the 4in nibs of the columns, constructed of extruded sections of 50SWP aluminium, natural colour, etched and anodized. 2, A mullion cover section casing to the nib of the column of 50SWP etched and anodized. 3, Cover fillets at the junction of the windows and between window and mullion of similar material. 4, A reeded aluminium spandrel composed of specially extruded sections of 33S aluminium between window sill and head of window below, dark grey in colour, etched and anodized. The section was specially designed by the architect for this job.

Internal Finishes

Offices: Acoustic tile ceilings and plastered walls. Movable and glazed partitions of patent type incorporating aluminium members.



End elevation, clad in aluminium curtain walling with spandril infill panels of extruded sections etched and anodized

Entrance hall reception area. Flooring and wall lining are in marble, the desk is hardwood with aluminium trim

On the lower ground floor, rooms are finished in accordance with special requirements. Hard cement tiles are used for the floors of the central test, machine room and chemical laboratory. The laboratory has tiled walls.

Throughout the building aluminium is used where appropriate, for example, in handrails, railings, door furniture, patent partitions, switch plates, etc.

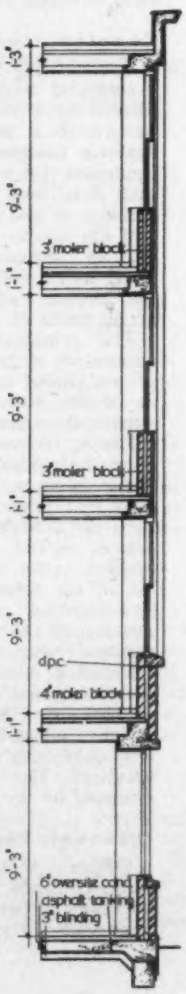
Services

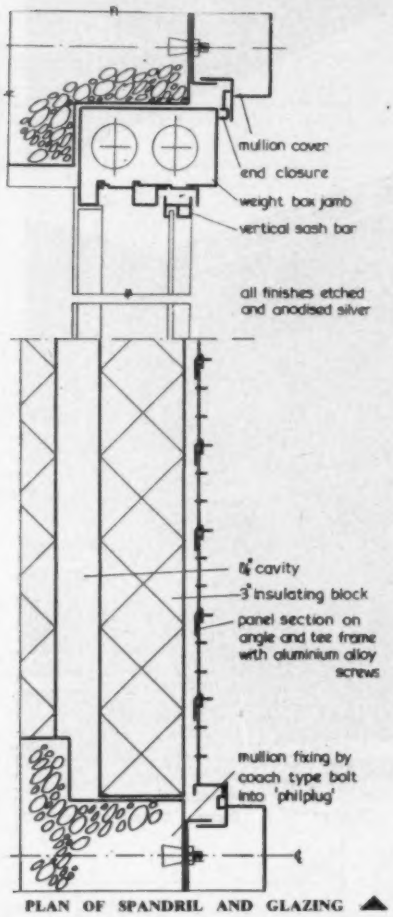
Low-pressure hot-water central heating is provided from a calorifier fed by steam from the works. The heating units are panel type radiators under the windows.

The windows give ample ventilation to the offices, but artificial ventilation is installed to the chemical laboratory, furnace rooms and elsewhere. Ducting is concealed in the ceilings of the corridors. A passenger lift is provided. Plumbing and r.w. pipes are concealed in internal service ducts.

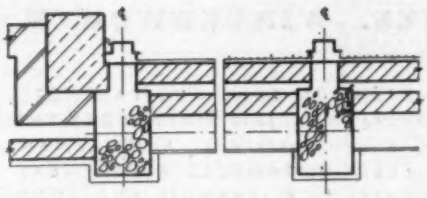
The entrance, staircase and hall are made a prominent feature of the design. The glazed wall and canopy are framed in aluminium sections, set in a natural stone surround

WALL SECTION
SCALE: 1 IN=8 FT

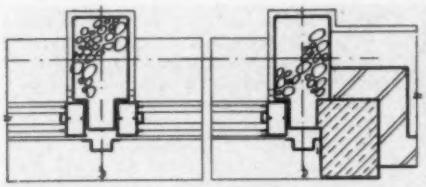



mullion cover
end closure
weight box jamb
vertical sash bar
all finishes etched and anodised silver
½" cavity
3" insulating block
panel section on angle and tee frame with aluminium alloy screws
mullion fixing by coach type bolt into 'philplug'

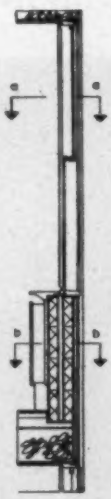
PLAN OF SPANDRIL AND GLAZING
SCALE: 1/6 F.S.



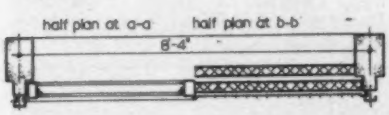
PLAN BELOW CILL

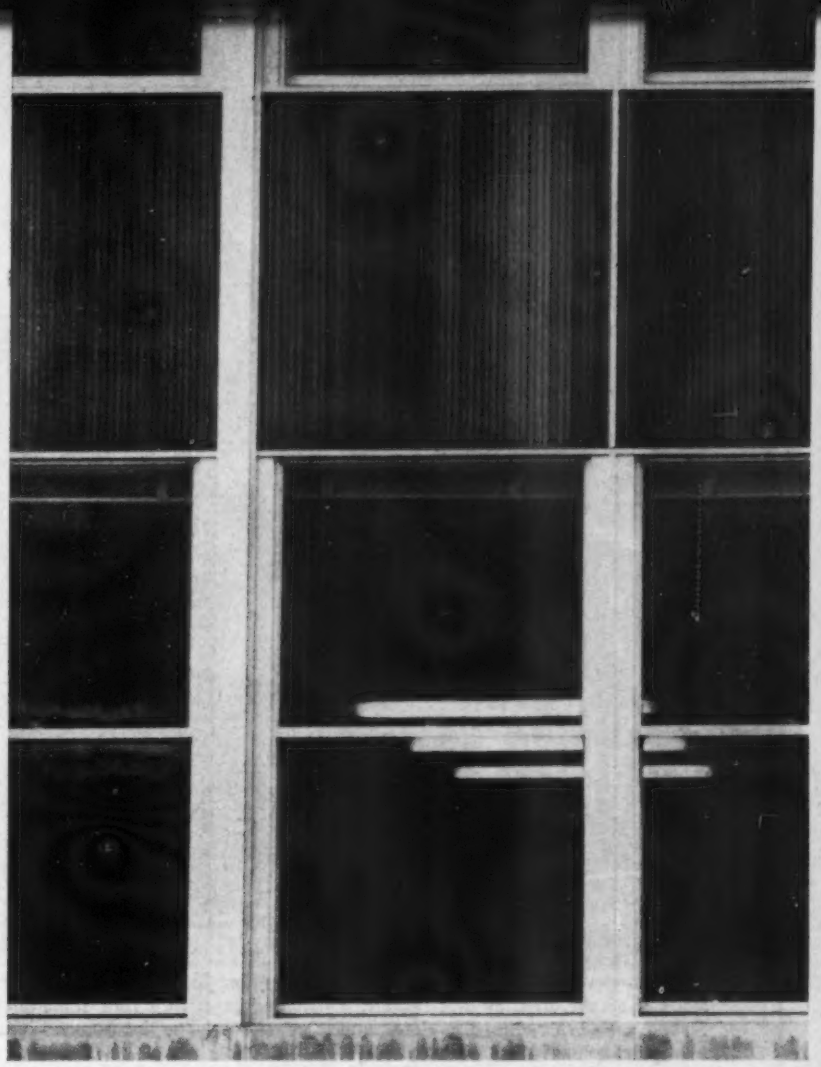


PLAN ABOVE CILL
SCALE: 1 IN=2 FT



KEY PLAN AND SECTION. SCALE: 1 IN=4 FT





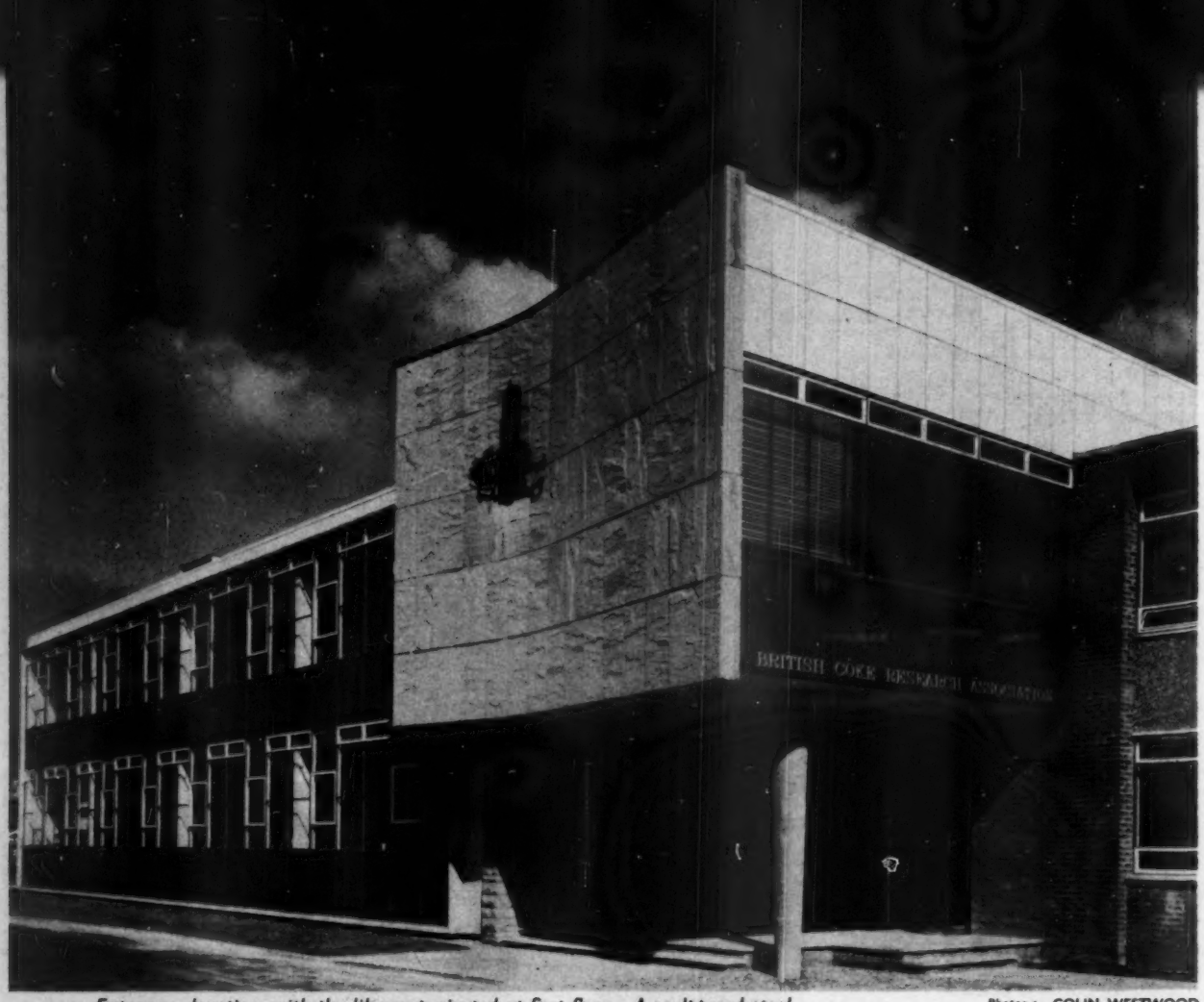
The aluminium curtain walling is designed on a 4ft 2in module. A composite unit 8ft 4in wide is made from two double hung sash windows with reeded aluminium spandril panels. Mullions, cover strips to concrete columns, and window fillets are all of aluminium

OFFICES, MONMOUTHSHIRE

General Contractors:
HINKINS & FREWIN LTD.

Site Engineer:
D. C. McKAY, NORTHERN ALUMINIUM CO. LTD.

Sub-contractors and suppliers:
Balustrade and Railings: Gardiner, Sons & Co. Ltd. *Canopy:* Wainwright & Waring Ltd. *Door Furniture:* Walker & Wood Ltd. *Electrical, Heating and Ventilating:* George E. Taylor & Co. *Floor Finishes:* Armstrong Cork Co. Ltd. *Foundations:* Le Grand Sutcliffe & Gell. *Kitchen Fittings:* Benham & Sons Ltd. *Laboratory Fittings:* The North of England School Furnishing Co. Ltd. *Lift:* Hammond & Champness Ltd. *Marble:* Whitehead & Son Ltd. *Mineralite:* Mineralite Ltd.; Cooper Wettern & Co. Ltd. *Mosaic:* Zanelli (London) Ltd.; Marriott & Price Ltd. *Patent Partitions:* Compactom Ltd. *Sanitary Fittings:* John Knowles & Co. (London) Ltd.; Adamsez Ltd. *Special Furnishing:* Ian Henderson Ltd. *Solid Floors:* Pierhead Ltd. *Windows:* Williams & Williams Ltd.



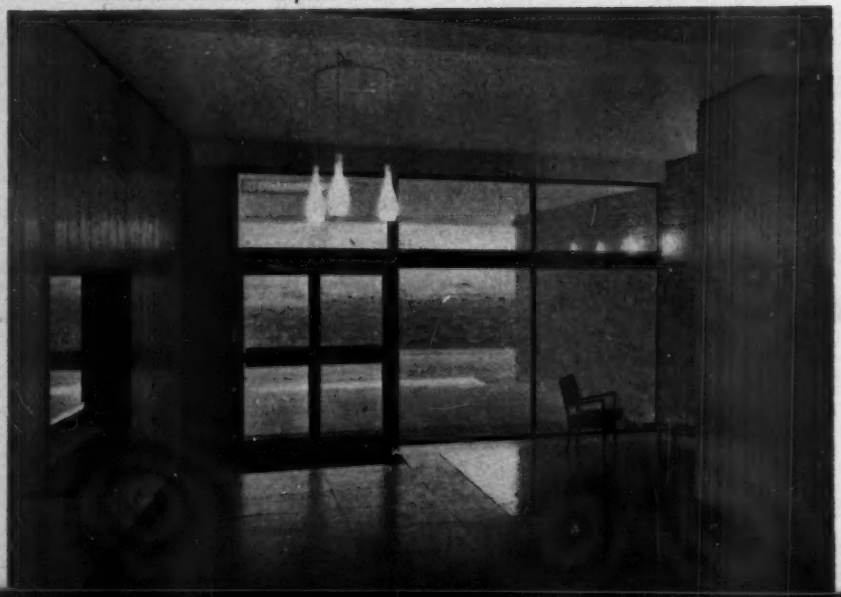
Entrance elevation, with the library projected at first floor. A sculptured steel motif of a coke oven, by Eric Peskett, is mounted on a riven York stone background. Return walls are slate, and cast stone. The laboratories have Muroglass spandrils in curtain walling

Photos: COLIN WESTWOOD

RESEARCH LABORATORIES, WINGERWORTH

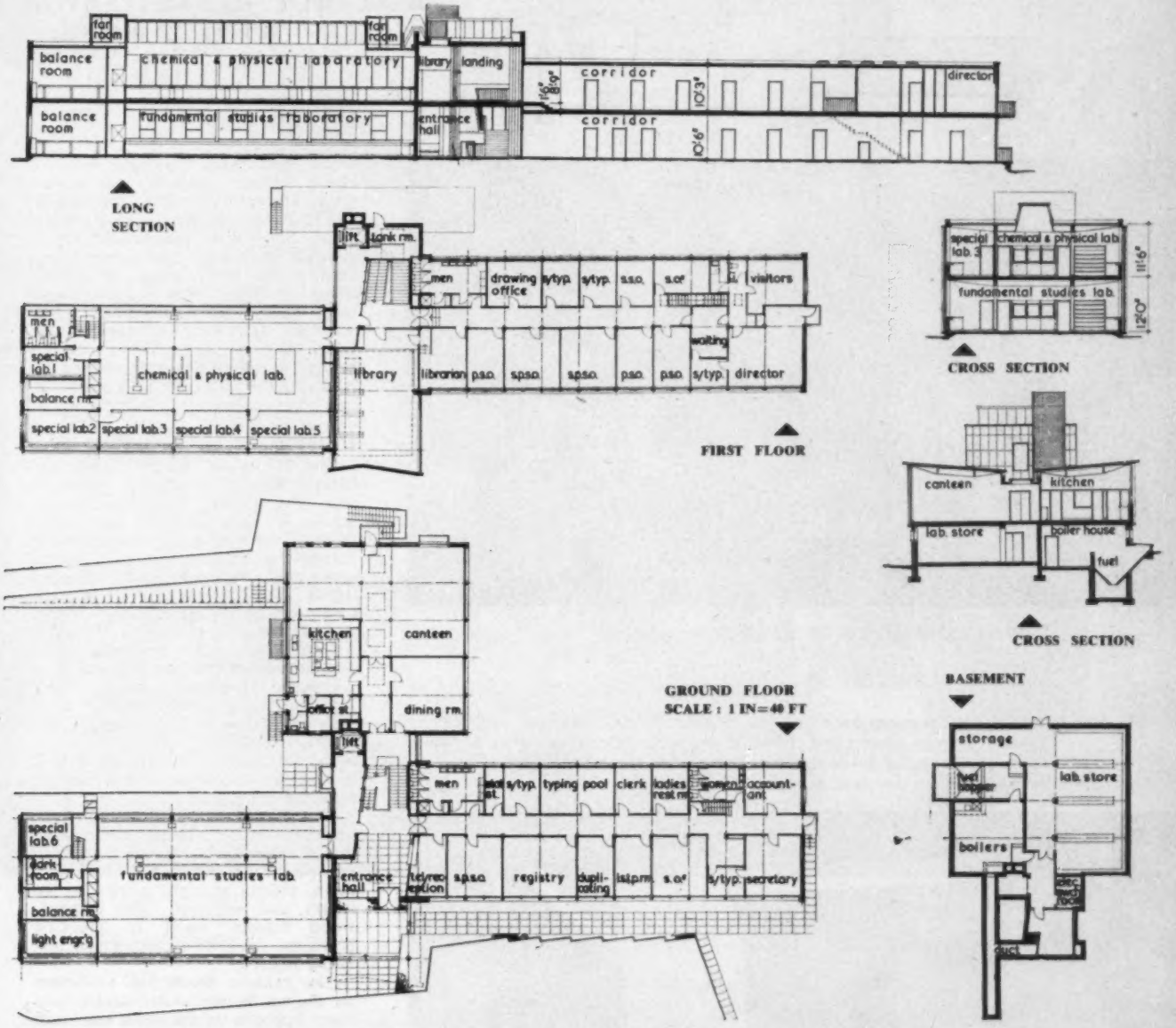
Architects: WESTWOOD SONS AND PARTNERS
Partner in Charge: Z. JAN PIETRUSZEWSKI
Assistant: A. CHAPMAN
Structural Engineers: FELIX J. SAMUELY & PARTNERS
Quantity Surveyors: L. A. FRANCIS AND SONS

Entrance hall and reception desk



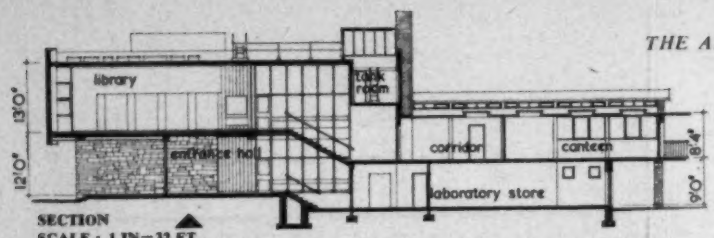
THE new laboratories and offices at Wingerworth, Chesterfield, for the British Coke Research Association, were required as a result of growth in the association's activities, and from their decision to concentrate all research work on one site. The association was formed in 1943 to centralize the separate activities which were being carried out by the Midland, Northern, and Scottish Coke Research Committees, namely, to promote research on the production and utilization of coke and its by-products. Finances are provided by the British Coking Industry Association, assisted by grants from the Department of Scientific and Industrial Research.

The clients' requirements came



Laboratory wing and rear entrance

RESEARCH LABORATORIES WINGERWORTH



Staircase and reception at the rear of the entrance hall

Special attention has been paid to corridor design. Recessed strip ceiling lights add visual interest and offset the strong corridor perspective. Borrowed lights are framed in hardwood, and form panels which break up the large wall mass and reduce the sense of enclosure

under four main headings: laboratories, offices, canteen and workshop laboratory. The last-named had to be closely linked with a coking plant and was established in a separate building. The other three formed the three wings of a "T" shaped building with a library and main stair in the centre. The site was not level and advantage was taken of the slopes to place the boiler house (which in this case needed to be a special feature) and main store in a semi-basement.

Design

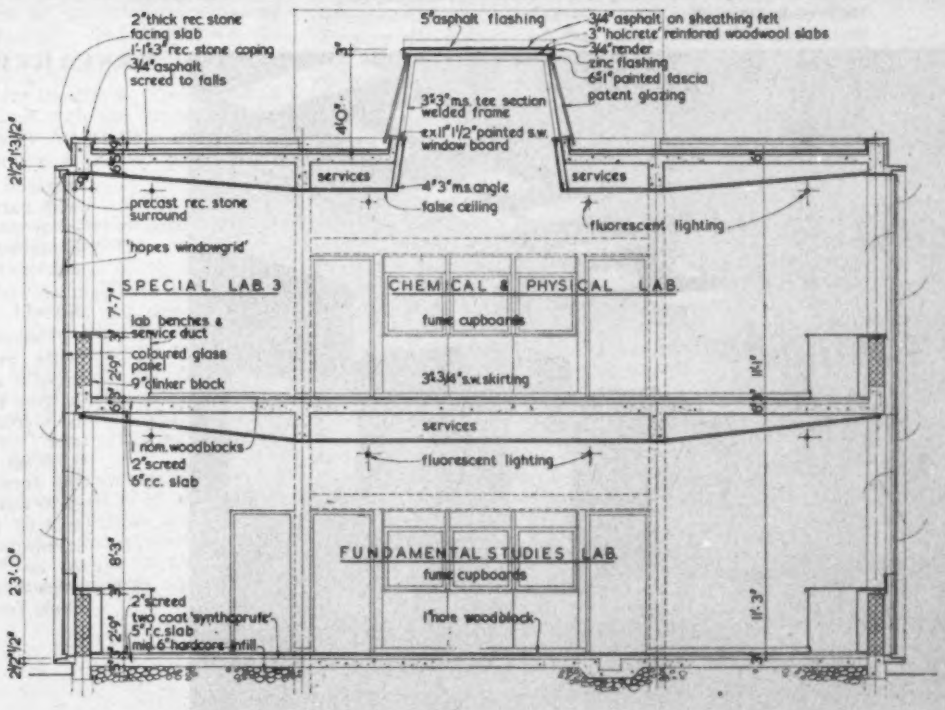
The laboratory wing housed two main laboratories, one for chemical and the other for fundamental studies. The services for these laboratories were run at the perimeter behind the benches, the latter having removable cupboard and drawer units. Services to central benches at ground floor were run in the floor, and on the upper floor in the false ceiling below. The ventilation and heating system is a combination of a preheated fresh-air supply, and circulator convector heaters, with fans extracting through ducts to the roof. The flat roof is subdivided by a monitor roof. Ceilings are sloped to assist air circulation and to increase reflected light.

The administrative wing is planned on conventional lines, but special attention has been paid to the design of its central corridor. The fluorescent lights placed at right angles to its length, and borrowed lights in hardwood frames, assist in breaking down the sense of enclosure and add visual interest.

The canteen block has a kitchen on the north side and a senior staff room opposite on the south side, with the main canteen extending right across, but with a sliding screen for subdivision. The ceilings generally are finished with asbestos spray to reduce condensation and to give good acoustic conditions. In the senior staff room a wooden suspended ceiling hides the structural members. The ceiling slopes upwards to north and south with a low centre portion of clerestorey ventilation.

The library is considered the cultural centre of the institution and has been treated as a special feature. The ceiling is lined with acoustic board cut to a pattern to reduce the dazzle associated with grooved boards. A laylight is provided with random glazing, to give extra light over the book shelves. The latter have drawers and flaps arranged alternately so that there are adequate surfaces on which to place reference

Services in the laboratories are run at the perimeter behind the benches, and underfloor to the island benches. Ceilings are sloped to increase natural light and to assist air circulation. A preheated fresh-air supply and extraction is provided



SECTION THRO LABORATORIES
SCALE : 1 IN=8 FT

THE ARCHITECT and Building News,
11 February 1959

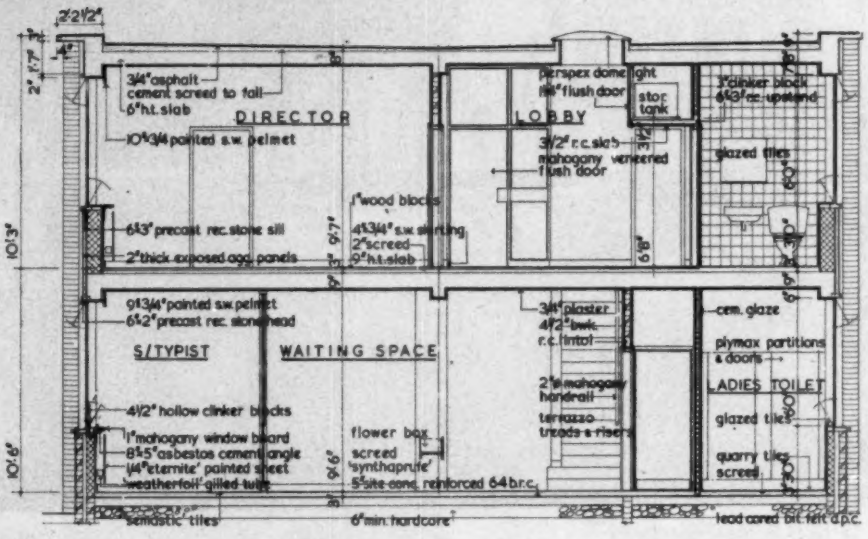
General Contractor:
THOMAS BEIGHTON LTD.

Sub-contractors and suppliers:

Acoustic Ceiling: Sundeala Board Co. Ltd. *Blinds:* Danaura Ltd. *Doors:* Jayanbee Joinery Ltd. *Electrical Work:* Tyler & Freeman Ltd. *Flooring:* The Philip Flooring Co. Ltd. *Frames:* Stuarts Granolithic Co. Ltd. *Heating:* Weatherfoil Heating Systems Ltd. *Ironmongery:* Stedall & Co. Ltd. *Kitchen Equipment:* Stotts of Oldham. *Kitchen Vent:* Keith Blackman Ltd. *Laboratory Fittings:* North of England School of Furnishing Co. Ltd. *Laboratory Partitions:* Williams & Williams Ltd. *Library Ceiling:* Excludairs Ltd. *Library Fittings:* Harris & Sheldon Ltd. *Main Gate:* George Wragge Ltd. *Metalwork:* Tylers Architectural Ltd. *Pavement Lights:* Lenscrete Ltd. *Reinforcements:* G.K.N. Reinforcement Ltd. *Roofing:* Faldo Asphalte Co. Ltd. *Sanitary Fittings:* B. Finch & Co. Ltd. *Slate:* Setchell & Sons Ltd. *Steel:* Moreland, Hayne & Co. Ltd. *Terrazzo:* Jaconello Ltd. *Trucks:* E. Hill Aldam & Co. Ltd. *Wall Panels:* Hilcrete Ltd. *W.C. Partitions:* Flexo Plywood Industries Ltd. *Windows:* Henry Hope & Sons Ltd.

Interior of the directors' room, which has a small projecting balcony

SECTION THRO OFFICE WING SCALE : 1 IN=8 FT



The library is considered the cultural centre of the institution. Book shelves have drawers and flaps alternately for placing reference material

RESEARCH LABORATORIES WINGERWORTH

material. The curved wall is lined with natural pine boarding. The floor is of cork. The general effect is a combination of comfort and quiet efficiency.

Cost

The contract was placed at a time when prices were still rising rather rapidly and the builders were asked to give two quotations, the second to be a fixed price contract with no rise and fall clause. The latter at £129,590 and 2·4 per cent higher than the former was accepted. The final cost worked out at 2s 11¼d ft cube and £3 19 3d ft super for workshop laboratories and 5s 3d ft cube and £4 6s 3d ft super for laboratories, offices and canteen. The figures include for fittings, services, etc.

Information Digest

OFFICIAL PUBLICATIONS

British Standard Specifications, from British Standards Institution, British Standards House, 2 Park Street, London, W.1. Telephone : MAYfair 9000.

● **B.S. 476 : Part 3 : 1958.** External Fire Exposure Roof Tests. Price 4s, plus postage.

B.S. 476:Part 3:1958 is a valuable set of tests of materials concerning their flammability as to penetration by and spread of flame. The object is to enable manufacturers to satisfy users that their materials have certain qualities of resistance to fire from outside sources, as from an adjacent building liable to burn. How important this is can be realized from the cases where fire has jumped across roads. Materials are subjected first to a short-time test, to eliminate those that do not warrant the full test. Heat radiation is applied and resistance is indicated by designatory letters, such as "AA" for those not penetrated at the end of one hour's exposure to radiation and have no "spread of flame". The designatory letters may be marked on the materials.

● **B.S. 3051 : 1958.** Coal Tar Oil Types of Wood Preservatives (other than Creosote). Price 5s, plus postage.

B.S. 3051:1958 appears to have less value as there is little doubt that most proprietary products which are coal tar derivatives satisfy this new B.S., but the object is to protect the qualities of these by limiting the proportion of soluble hydrocarbons and setting low flash points, which, in brief, prevents adulteration with lubricating oil. No change is made in B.S. 144, which applies only to creosote.

● **B.S. 3052 : 1958.** Electric Shaver Supply Units. Price 4s 6d, plus postage.

B.S. 3052:1958 seeks to standardize sockets for electric razors, to enable the plugs to fit one or more of the British, American and European outlets. All are 2-pin type, dispensing with earth connection, the British socket being 5A capacity, the American 15A and the European 10A. These are for shavers of more than 30V a.c., maximum 250V. There are nine tests to be satisfied, including those involving insulation, humidity and mechanical (to allow for the rough usage they are likely to get). Inaccessibility of live contacts and unearthed metal parts to accidental touch is an important condition. The Standard, of 15 pages, has been prepared with the support of the British Hotels and Restaurants Association and applies to fixed supply units containing a transformer to give between 30V and 250V.

● **Roof Drainage. Building Research Station Digest No. 116.** H.M. Stationery Office. Price 3d, plus postage.

This Digest opens by remarking that various "rules of thumb", for arriving at the number and size of r.w.p., are in use, based on experience of what has been satisfactory. Many are quoted in reference books, but the Digest now gives firm bases by which to calculate needs. The size and length of gutter between downpipes have not been governed by satisfactory "rules", and much dissatisfaction must have resulted from overflowing of gutters around small areas in large buildings.

There are three considerations: the average intensity of rainfall, its duration and the frequency of occurrence. Average intensity can generally be taken as 3in per hour. Some areas may have heavier falls, but generally records show that this quantity only falls for about five minutes every other year and for about ten minutes only once in eight years.

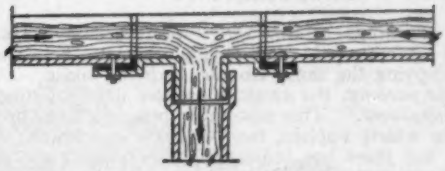


Fig. 1

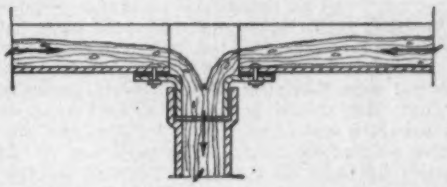


Fig. 2

Comparative diagrams showing the improved rate of rainwater discharge that can be obtained by using a rounded entry between gutter and r.w.p.

Up to 50 deg pitch, the angle of roof slope can be ignored. The quantity of water in gallons per minute being received is then found by multiplying the roof area on plan by 2·0 and dividing by 100. A formula for pitches greater than 50 deg is also given. A very slight fall in a gutter improves discharge appreciably. Angles on plan in gutters are very restrictive to flow. For example, an angle within 6ft of an outlet may result in a 20 per cent reduction in gutter capacity. If, however, the angle is rounded to only 1in radius the restriction is halved. If the angle is between 6ft and 12ft from an outlet these reductions can be halved.

Another detail which is beneficial is a rounded entry from the gutter into the r.w.p. This is achieved in the illustration in the Digest in Fig. 2 by showing a gutter outlet where the collars are immediately alongside the spigot of the outlet instead of being remote to the extent of the usual two or three inches. A detail improvement, such as this, should be possible in most materials.

The Digest says that downpipes as commonly used are unnecessarily large, and smaller sizes may be used without affecting the capacity of the gutter. Smaller downpipes will then run full bore, so joints must be sealed. Swannecks and bends at the bottom of the downpipe do not affect the capacity of the gutter.

The position of the outlets affects the sizes of the gutters. Where the outlet is in the centre of the run of gutter, the gutter capacity required for the roof area served may be half that required where an end outlet is provided. The sections of gutters vary greatly for a given size as to their capacity. The capacities of these can be calculated from a formula given in the Digest, but these are tabulated in gutter sizes from 3in to 6in for true half-round, nominal and ogee gutters, all laid level. If laid to falls of 1in in 50ft or more these capacities may be increased by 40 per cent. Another table gives recommended downpipe sizes for level gutters and those laid to fall (described as "sloping"). This gives outlet sizes of 2in to 4in diameter for half-round gutters from 3in to 6in sizes, but affected by the type of outlet, that is to say, whether sharp arrised or rounded and whether the outlet is at one end or intermediately.

An example is given of the working out of formula for arriving at gutter size and the application of the tables, but as these are for half-round and ogee sections, they are not applicable to valley gutters. These, however, are of section easily calculated, and by using the formula the flow capacity can be calculated, with such adjustments as are necessary for fall, angles and square or round outlets.

Information Digest (continued)

● **Financing of Housing in Europe.** U.N. Economic Commission for Europe, 1958. H.M. Stationery Office, P.O. Box 569, London, S.E.1. Price 5s 6d, postage extra.

The last paragraph in this very thorough study says: "When the difference in rent-paying capacity between families occupying the same amount of living space . . . is taken into account, the scope for wider differentiation of rents is apparent." This admirable principle does not appear to be widely applied, from a quick impression of the report, but there are indications that rents may be related to income if not to liabilities, i.e., family responsibilities. The latter factor is in some countries, as in the U.K. and France, taken care of, at least in theory, by the family allowances scheme, but from the data in the study it does not seem that such allowances are generally available. That rents should be related to income is, of course, a well-known and largely accepted principle, but it does involve politics too often. The ratios are by no means generally agreed. In the U.K. the rent payable has been from one-tenth to one-third of the income, according to various theorists and research workers, but never quite so low as 2 per cent to 4 per cent charged in Poland in 1956 for about 500 sq ft, including staircase lighting and cleaning. In Russia rents are about 4 per cent to 5 per cent. There are many pre-war houses in the U.K. which also have low rentals, showing exceptionally favourable relationship to income especially if all wage-earners in the house are considered.

The rent aspect is only one of the avenues explored in the study. The much more interesting one is that of the methods by which housing is financed in Europe, but Eastern Europe presented difficulties so is treated separately from the western nations, except for Yugoslavia. While government loans or subsidies are fairly generally available, a number of other systems are in use, such as housing co-operatives and normal investment by development companies or individuals. One point, in fact, which is quite surprising is the large amount of private money which is spent on housing, mainly through banks, but none quite so unexpected as that, in Czechoslovakia in 1957, individual or private dwelling construction amounted to 49 per cent as compared with State construction of 51 per cent. In the U.K., in 1955, they were 56 per cent from public funds and 44 per cent from personal or credit funds.

The study gives in tables some of the trends in housing size, which are affected by cost and by popular demand, the two being in conflict. In Austria existing housing was 79 per cent of two rooms or less and 13 per cent of three rooms, but in new construction the former size accounts for only 53 per cent and the latter 33 per cent. Italy, on the other hand, had 42 per cent existing of two-room dwellings and 20 per cent of five rooms, while new construction is only 6 per cent of two rooms and 49 per cent of five rooms, which is the highest proportion of that size in any country in that table.

Although housing in the U.K. appears to demand a very high proportion of the total building effort, table 9 shows that other countries are devoting considerably greater money to this end, the U.K. coming 14th with Portugal in the list, Finland comes first with 6·7 per cent and Switzerland next at 5·7 per cent, with West Germany at the same level. Turkey devotes least effort to housing, while Denmark and Ireland follow very closely.

TRADE ASSOCIATION PUBLICATIONS

● **Guide to Concrete Road Construction. Questions and Answers. (2nd Edition.)** Cement and Concrete Association, 52 Grosvenor Gardens, London, S.W.1.

This handy book should be a valuable aid to road engineers. It has two unusual features. One is that it is a commercial production, but carries with it the authority of D.S.I.R. Road Research Laboratory, with which the Association's Committee worked in co-operative research. The other is that it is available free of charge, although surely worth 7s 6d.

The previous edition was published in 1949 and much has been learned since those days. The new information has been incorporated in the present edition, which can be regarded as a standard work on the subject.

The arrangement adopted of posing questions and giving answers does not appear to have any great merit, unless it is that, in the absence of any index, there is the possibility one will see in the contents page the subject one is interested in. Each of the eighteen sections is dealt with in this way: a short question followed by a full answer. The sections are: 1. General. 2. Subgrade. 3. Base. 4. Waterproof underlay. 5. Design (there are thirteen points in this). 6. Reinforcement. 7. Joints. 8. Concrete (eleven points, including Admixtures, to which is added a note that Silicate of Soda surface treatment carries no real benefit). 9. Quality Control. 10. Plant and Equipment. 11. Construction (that is to say laying, transporting, tamping, etc.). 12. Surface Finish and Road Markings. 13. Curing. 14. Construction in Adverse Weather. 15. Surface Drainage and Kerbs. 16. Sewer and Service Trenches. 17. Maintenance and Repairs. 18. Pre-stressed Concrete Roads, which includes points in favour and against. A list of manufacturers of suitable machinery follows.

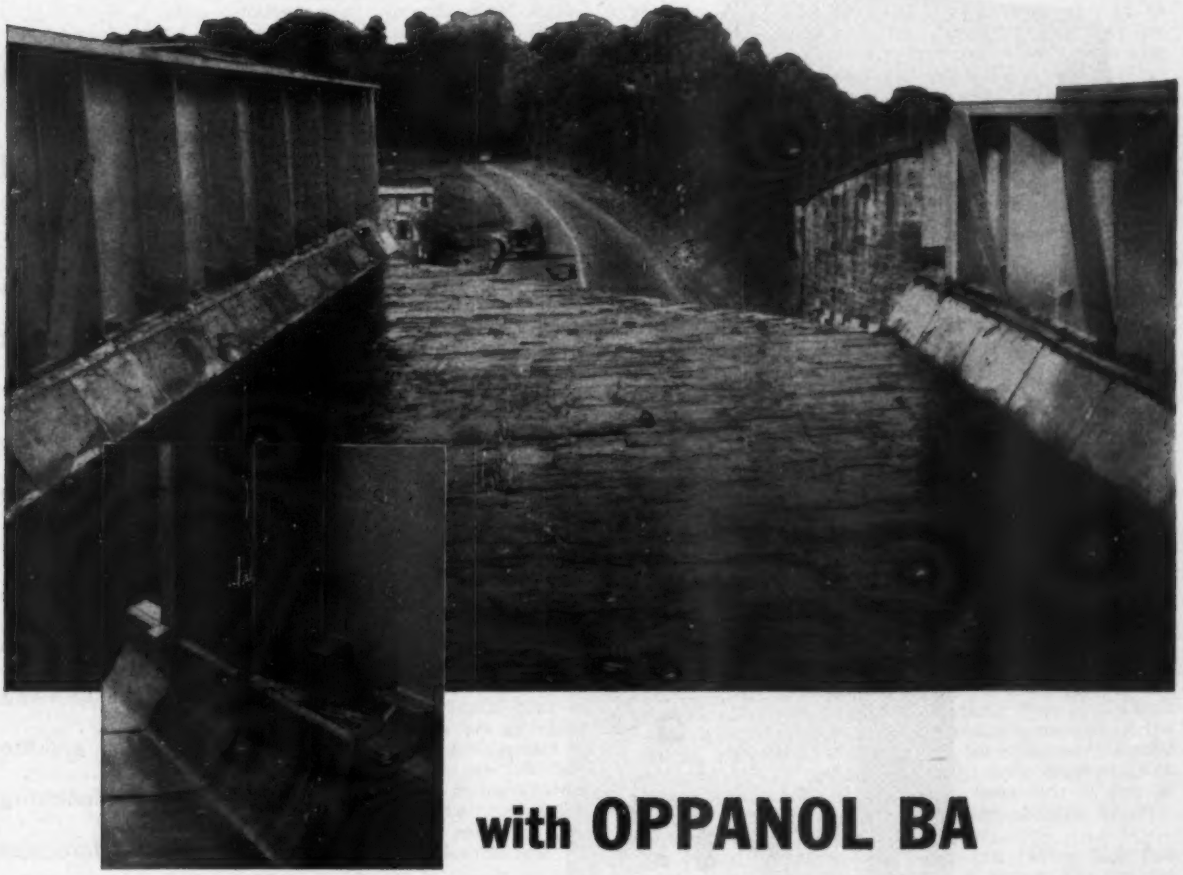
● **Specification of Hardwood Joinery.** The English Joinery Manufacturers' Association, Sackville House, 40 Piccadilly, London, W.1.

The foreword says that the architect's job in specifying hardwood for joinery is now much more difficult when "we are faced with a vast array of unknown species from all quarters of the globe, some good, some not so good, some horrible". Price alone is no real guide to the manufacturers quoting for a job, because woods having the same basic price may have very different working or machining properties.

The booklet has been prepared as a result of meetings between E.J.M.A. and the Science Committee of the R.I.B.A. The injunction is given to give the fullest possible information—to give the name of the selected wood, both as to species and botanical name, also to give an idea of the conditions in the building which the joinery will exist in, as to humidity and temperature. It is stated that all hardwoods shrink more than softwoods in seasoning, and at least $\frac{1}{4}$in should be allowed for each wrot surface. This, presumably, applies to woods imported as boards and not as logs, but a list of common imported board sizes is needed. A typical specification is given covering all desirable points, i.e., named wood with botanical name, condition of building (i.e., centrally heated building), protection of joinery on site and storage, fixing only after plaster has *completely* dried out, finish (i.e., paint or polish), wedging up only when fixing is to be commenced.

Some of the difficulties of the estimator follow. Teak (Tectona Grandis) has a very wide price range according to length, width and thickness, so a full description of each part is needed. Oak (Quercus spp) should be specified as Plain or Quartered (not "figured", although this usually results in this conversion), but curiously enough there is no indication here that Austrian oak differs from English or that coppice-grown timber differs from hedgerow, in colour and grain. Mahogany in quarter-sawn conversion tends to show a stripey figure "and this should be specified if required". If any one comment embodies the architects' difficulties it is this one. Any architect wanting a stripey figure will surely specify Sapele, and if, having had so much of it, he wants a change, he ought to know how to specify "plain Lagos", "figured Lagos" or some other mahogany and be able to describe

bridging the years



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Photograph shows the deck before completion, with the bridge superstructure still to be rolled into its final position. (Courtesy of British Railways, Scottish Region)

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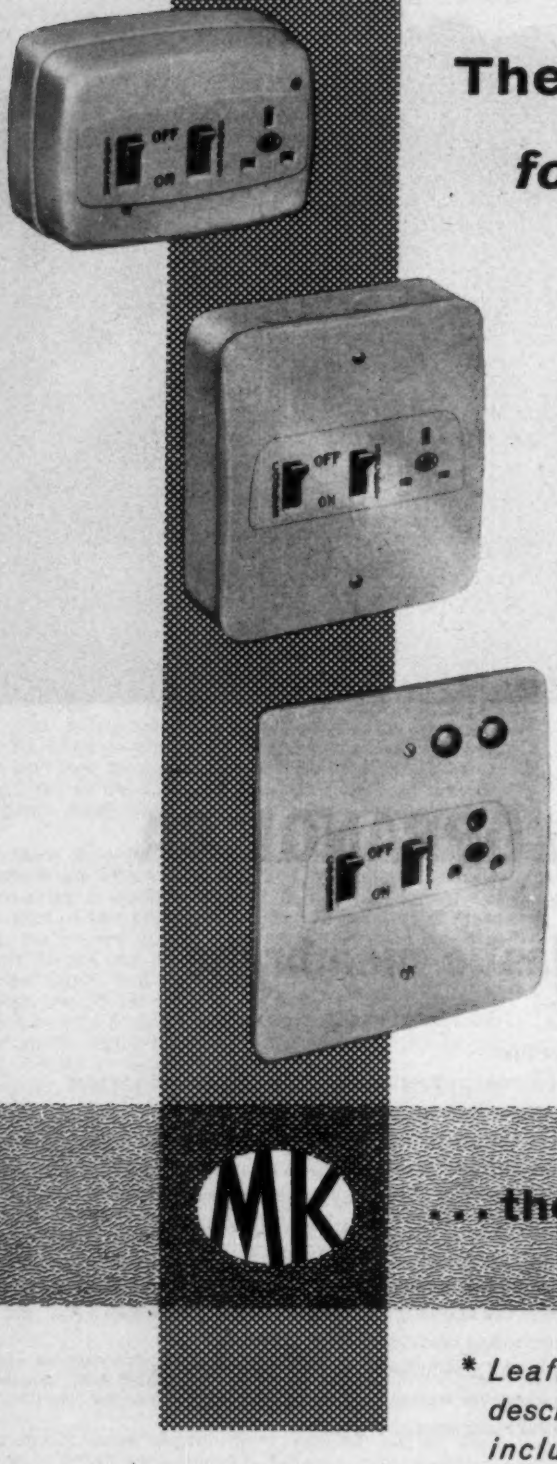

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Information Digest (continued)

the figure (not grain) he wants. No other mahogany has quite the stripe of Sapele, whether because of the nature of the tree or the manner of converting is not clear.

In addition to the woods mentioned above are notes on Obeche, Iroko, Walnut and Meranti, with Agba strangely omitted, as to colour, species and working. There follow some notes on durability and movement in service, with reference to "The Intelligent Use of Timber", a publication of the Kiln Owners' Association noticed in this column in April, 1958.

There follow four pages on which are listed alphabetically thirty-five hardwoods together with botanical name of each species, Sawmill Class (which indicates workability between "2" and "5"), weight, durability, movement in service, availability as plywood and veneer, uses, supply position, price in the yard and, finally, comments: such as "very severe on tools", which does not follow after Tectona Grandis as one might expect, but does after all four walnuts. Is it that E.J.M.A. consider that everybody knows that teak is difficult to work so need not say so, quite apart from the dermatitis from which some suffer after using this wood?

Although prices are given, it is pointed out that these are for "Prime Square-Edged Stock"—the highest commercial grade—in stock at factory or mill for average specification in December, 1957, but to this should be added charges for selection to comply with the architect's specification.

● **Technical Bulletin 41.** Furniture Development Council, 2-4 Dalmeny Avenue, London, N.7.

The editorial of this issue is about chipboard and its use in furniture, for which it is becoming more and more used. The growth of manufacture in Germany has risen from 28,800 cu m in 1951 to 359,800 cu m in 1957. In Britain the rise has not been so spectacular, having risen only from 25,000 tons in 1956 to the rate of 32,600 tons in 1958. Production of furniture through the use of chipboard requires complete redesign, but as there appears to have been no marked public objection to the new development, such as plywood encountered, the manufacturers were hopeful that its advantages could be used fully. Some difficulty had been experienced in veneering due to the coarse, open surface so often characteristic of these boards. Adhesive must be applied as thickly as possible and an under-veneer or counter-veneer may be needed so that the finished veneer may be suitable for polishing. Fixing of hinges has presented problems, as have corner-joints, because of the tendency of the boards to split or spall at edges.

The rest of the Bulletin deals with Summaries and Developments culled from other publications and manufacturers' literature, dealing with many aspects of the trade.

● **Rubber in Road Engineering. Technical Note No. 3.** The Natural Rubber Development Board, Market Buildings, Mark Lane, London, E.C.3.

A previous publication on this subject was noticed in this column in February, 1958, the present booklet expanding the information then available. The use of rubber in roads, other than as preformed treads on blocks, is not a recently applied idea, for in 1937 the Limmer and Trinidad Lake Asphalt Co., in co-operation with the Rubber Growers' Association, laid surfaces in Dorset incorporating rubber latex and rubber nitrite crumb.

Laboratory work is described and situations of experimental stretches of road are given, together with methods of laying. Improved methods of patching defective road carpets have also been developed. These are being compared with patches made with asphaltic mixes free from rubber.

● **Fixed Fire Extinguishing Equipment in Buildings.** Fire Protection Association, Garrard House, 31-45 Gresham Street, London, E.C.2. Price 1s 6d.

Fixed water and foam fire fighting equipment is so frequently installed that the fire risks for which they are suitable are pretty generally understood. This booklet also describes installations using gas and dry powder.

Water can be used on flammable liquids when special spray equipment is fitted, although foam is more often installed. In addition, however, carbon dioxide, dry powder, carbon tetrachloride, chlorobromomethane, steam, nitrogen and exhaust gas may be effective. Live electrical equipment is possibly the most dangerous source of fire in that, in a panic, the wrong type of portable equipment may be used. The suitable extinguishers are carbon dioxide, dry powder, carbon tetrachloride and chlorobromomethane.

Dry powder installations are composed of powder container and suitable gas cylinder, these being connected by pipework to the point of risk, the gas on automatic release blowing the powder along the pipe to discharge over and cover up the fire.

An appendix gives information to enable the pressure at nozzle of a hose reel to be worked out, taking into account water-main pressure, frictional losses, head of water and smoothness of bore of hydrant main.

● **B.C.U.R.A. Gazette No. 35.** British Coal Utilisation Research Association, Randalls Road, Leatherhead, Surrey. Price 2s 6d.

This quarterly gazette, in the issue received, gives reports on progress in research on appliances of widely differing types. Part is devoted to a report on working sectional models of furnaces in which experiments can be made to increase efficiency of combustion or reduce maintenance costs. A report is also included of an investigation into a problem of downdraught in domestic fires in a block of flats in London. Not only did smoke come out of the fireplaces when fires were alight, but not infrequently smoke also found its way down a flue to an unlit fireplace from a neighbouring flue. This freakish behaviour is not so very rare, but it is possibly even more difficult to solve than an ordinary "smoking" fireplace.

The report in the gazette points out that a high flue temperature is necessary to create a strong flow up the flue and that this can only be given if the quantity of "room" air admitted to the flue is very small. A restrictable throat gives control over the quantity of air entering the flue, so a "Hurdapta" free-standing convector fire was tried out in the worst position. This proved to be virtually a complete success in stopping smoking, but the qualification is necessary because, on occasion, some smoke drifted out when the appliance was being lit. All the affected flats were then fitted with the same appliance and the users' experiences are tabulated. Whereas 20 of the old stool grates had given much trouble, none of the new appliances gave more than "moderate" trouble from smoking, 17 experienced none, and four were occasionally slightly troublesome. The effects of wind pressure were also investigated, a slight wind having little effect, but in five cases very strong wind resulted in slight smoking.

The borough taking part in this trial had already tried out a number of types of cowl or pot, none of which had been more than slightly beneficial and the adoption of free-standing convectors with restricted throats was a much cheaper and easier solution than the provision of electric space heating which would have needed new cables and installations. The borough went to the additional expense, however, of taking out the old tiled surrounds and fitting new recessed surrounds as the "Hurdapta" needs no fireback. This much increased the depth of hearth from the front of the appliance to the curb, which too often is dangerously small when such fires are placed in front of existing fire openings.

Information Digest (continued)

TRADE PUBLICATIONS

● **The Pitch of Tiled Roofs: What is the Practical Minimum.** Marley Tile Co. Ltd., Sevenoaks, Kent.

This company notes in this pamphlet the prevalent habit of using very flat pitches for tiled roofs, some of these pitches being so flat as to risk early disintegration of the tiles and penetration of rain by wind pressure at the laps of the tiles—local authorities are often lax in preventing poor construction of roofs, not only as to the main roof slopes but as to eaves having sprockets or bell-cast, which result in much flatter slopes.

The pamphlet quotes Code of Practice of Roof Tiling (C.P. 142:1958) in which 40 deg is recommended for plain tiles and 35 deg for *interlocking* tiles. Clearly non-interlocking single lap tiles ought then only to be used at higher pitches. Nevertheless, the Marley Tile Company are prepared to fix their tiles as low as 30 deg and to guarantee the tiles against lamination or decay for 50 years and against defects in workmanship for 10 years.

In view of the Code of Practice this seems a bold claim, but they have made tests on many types of roof tile at many pitches, using wind tunnels and water sprays before issuing their guarantee. The critical pitch was found to lie between 15 deg and 20 deg for all tiles tested, including plain tiles and single-lap tiles, both interlocking and non-interlocking. But the company do not suggest that such very low pitches should be used, for heavy gusts of wind during heavy rain may result in penetration. The Marley Tile Co. therefore recommend that when it is proposed to fix tiling at pitches below 30 deg their advice, based on their test experience, should be obtained, as the roof design and detail may be affected by degree of exposure of the site, height of building and shielding by adjacent buildings. When the company are satisfied that their recommendations are being implemented, their guarantees will operate for pitches below 30 deg.

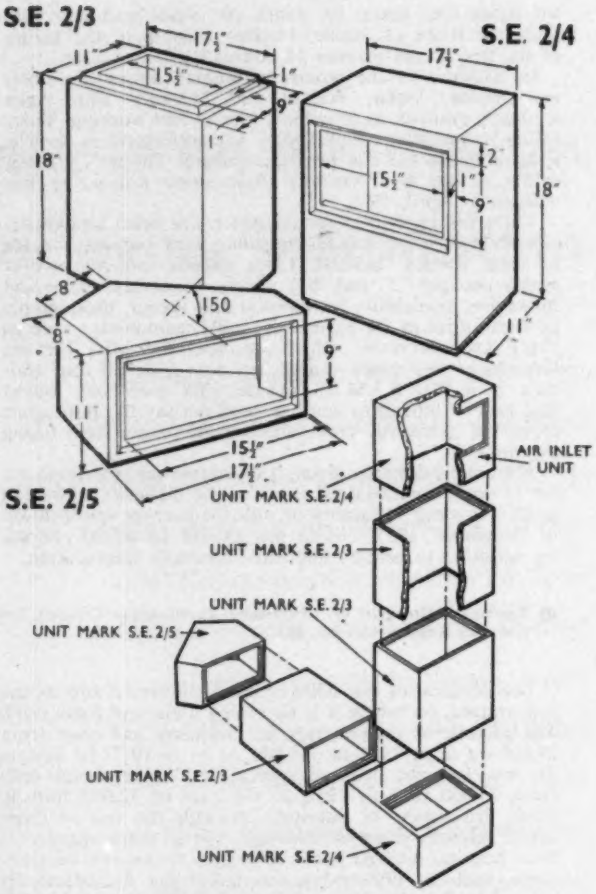
● **The SE-DUCT Flue System.** True Flue Ltd., Convector House, Acacia Road, St. John's Wood, London, N.W.8.

It is just a year ago since this column noticed the new system evolved by the South-Eastern Gas Board for grouping gas-heating appliances around internal ducts and the pilot scheme for flats being erected at Gateshead. True Flue supplied the duct sections of the SE-DUCT and in this little booklet set out the principles of the system and the appliances for which it is suitable, including water heaters, space heaters and clothes drying cabinets, the makers of the appliances being named.

Recommendations are then given for the siting of the vertical ducts, but maximum economy is achieved by having one duct at most per flat. One wall of the duct must form part of the room to be served when a natural convector heater is used, but when heating is by means of fanned air this restriction can be avoided.

In tabular form are given recommended sizes of ducts for single appliances in flats related to the number of storeys of the block and for cases where more than one appliance is to be fitted in each flat. Similar tables give recommendations for maisonnettes. The sizes of duct units are also given, these being made of refractory concrete in height of 18in and are provided with rebated horizontal joints for bedding in cement and sand or fireclay compound. A point to note is that damage to the duct from tenants driving nails into the units must be prevented and this can best be achieved by casing the ducts with breeze blocks to give 4½in total thickness.

Illustrations show plan arrangements for flats and the shapes of the duct units.



Units of the SE-DUCT pre-cast flue system by True Flue Ltd., designed for the installation of gas appliances for space heating, water heating and clothes drying, in multi-storey dwellings

● **Newsummary 3.** H. Newsum Sons & Co. Ltd., 238 High Street, Lincoln.

A new internal partitioning system is offered in the issue of December, 1958. It is claimed to be available at low cost and to be very adaptable. The planning module is 2ft, but filler panels can be provided. Heights are made to suit the particular job and ducts are provided to carry electric and telephone wiring. A cruciform arrangement of junctions provides a hollow core for vertical wiring.

Another idea now in production is the Diaframe roof decking. This was first used on a housing scheme designed by Harry W. Weeden, F.R.I.B.A., and Partners, in which a lightweight low-cost roof was necessary. The architects collaborated in the structural design of the Diaframe decking, which provides 15ft clear span. No details are published.

An example is given of another use of Trofdek in a school project and a short account is added of the work of the Forest Products Research Laboratory which has now been in being for 30 years. In its 13 sections every type of problem concerned with the use of timber can be considered.

RUBEROID CASE HISTORIES

First-class Nakuru

With its fine new railway station — the most up-to-date in East Africa — the town of Nakuru can welcome the world. Until very recently a few old sheds of wood and tin stood in for a station in this flourishing East African town, centre of Kenya's Rift Valley agricultural area. To Ruberoid Contract Agents went the contract for the supply and fixing of some 40,000 square feet of Ruberoid Roofing for the new building, designed by the Chief Architect, East African Railways and Harbours Administration.

Nakuru's pride and joy. The Ruberoid Contract Agents Messrs. Naumann, Gepp (East Africa) Ltd. were responsible for all roofing. Ruberoid Contract Departments throughout the British Isles and Contract Agents overseas offer the benefits of expert advice at the planning stage and skilled craftsmen to execute the work.

RUBEROID

C328c THE RUBEROID COMPANY LIMITED, 344 COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON, W.C.1.

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MANCHESTER: BLACKFRIARS 9991
NEWCASTLE UPON TYNE: 21353
NORWICH: 24393
NOTTINGHAM: 52131
PLYMOUTH: 67885
READING: 50291
SHEFFIELD: 51594
SOUTHAMPTON: 26252

Information Digest (continued)

CATALOGUES

● **Materials.** Holoplast Ltd., 116 Victoria Street, London, S.W.1. Makers of Decorplast.

This company has issued a new pamphlet showing 47 new patterns and colours of their laminated plastic melamine faced sheets, which are in addition to the wood veneer surfaces. A quality resistant to cigarette burns is available.

● **Materials.** Pilkington Brothers Ltd., St. Helens, Lancashire.

A new pamphlet illustrating a number of "Armourplate" glass door assemblies has been issued by this company. These range from single door with wing lights to ranges of pairs of doors, with or without fanlights. Indications of the sort of decorative treatment, which can be given to the glass by brilliant cutting or painting and firing, are shown but are scarcely of the quality one expects from this firm. The front cover shows glass used structurally as stiffening webs, as is the continental practice in growing popularity, but the letterpress does not say whether this development is part of the assemblies offered.

● **Materials.** Bartrev Board Co. Ltd., 9 Henrietta Place, London, W.1.

This firm has issued two more Information Sheets, Nos. 1/1 and 2/4. The former gives the varieties of board available, tolerances, physical properties, finishes (including veneers and plastics), working, jointing, storage and distribution. The latter is concerned with its use in furniture, both in free-standing units and when built in. Their pamphlets were awarded a Certificate of Merit in 1958 for technical literature sponsored by the R.I.B.A. and the Building Centre.

● **Materials.** Thos. W. Ward Ltd., K.P.C. Department, Albion Works, Sheffield.

A pamphlet has been published on "Compri-Strip", which is a foamed plastic strip, bitumen impregnated and stuck with special adhesive. It is used as a bedding and sealing strip between two materials to give dry and watertight joints. The strips range from $\frac{3}{8}$in x $\frac{3}{4}$in to $1\frac{5}{16}$in x $3\frac{1}{2}$in, there being nine sizes in all.

● **Electrical.** Crompton Parkinson Ltd., Crompton House, Aldwych, London, W.C.2.

This firm have a new publication dealing with their "Modulume" luminous ceilings. These are of two patterns, the "strip" and the "rigid arched pans", slung below fluorescent lighting. Both forms are of polyvinyl, the former in flat lengths and the latter in square panels. No sizes of these are given. The brochure is not technical, consisting mainly of photographs of finished contracts.

● **Plant and Equipment.** Doulton Industrial Porcelains Ltd., Wilnecote Works, near Tamworth, Staffs.

This firm are makers of chemical and industrial stoneware containers and plant. Their general catalogue has been received which lists 17 products. These include laboratory sinks, tanks, pots, ducts, pipes, etc., and valves in metal suitable for chemicals.

● **Plant and Equipment.** Siddons (Redhill) Engineers Ltd., Redhill, Nottingham.

These makers of steel demountable partitions for offices, stores and compartments have a new leaflet illustrating this section of their manufactures. It is based mainly on a 3ft grid and delivery can be effected in about four weeks.

● **Plant and Equipment.** A.C.E. Machinery Ltd., Porden Road, Brixton, London, S.W.2.

This company have reprinted their leaflet dealing with their ACE Midget Hoist which is designed for fixing to tubular scaffolding with the minimum of adaptation. Ancillary equipment, also suitable for other makes of hoist, is illustrated and described.

● **Pipework.** Turners Asbestos Cement Co. Ltd., Trafford Park, Manchester 17.

A comprehensive catalogue of asbestos cement pressure pipes, to B.S. 486:1956, has been issued. Four pressures are catered for, from 100ft head to 400ft head and diameters from $1\frac{1}{2}$in to 24in. Test pressures are double the working pressure. The catalogue also illustrates a wide variety of joints or couplings and in the descriptive matter an indication is given of the range of uses for which pressure pipes are particularly suitable. Standard lengths of pipes and their weights are also given. Folded in at the back are graphs showing frictional losses for pipes in each class.

● **Pipework.** Winser Ltd., Rylett Crescent, London, W.12.

A new catalogue, No. 14, of cast-iron drainage goods and ancillary equipment, has been published. Appropriate British Standards numbers are quoted. Manhole covers, gratings, valves, tools and testing equipment are included in the catalogue. Also described and illustrated is the Winser patented combined unit, enabling waste connections to be made at any points to a stack pipe. Pipes with bosses suitable for single stack drainage are also shown.

● **Constructional.** J. Gerrard & Sons Ltd., Swinton, Manchester.

This company have published a brochure illustrating the extent of their building operations in recent years and the organization behind it. The company started in 1864 in a small way and is now taking on contracts of the largest size in industrial and civil engineering and housing construction.

● **Constructional.** J. L. Green & Vardy Ltd., 79 Essex Road, Islington, London, N.1.

This company have issued a folder showing the range of high-class joinery they are able to do. This includes fixed and movable furniture, church furniture, carved wood and panelling, much of which has been supplied to well-known contracts.

● **Ventilation.** Woods of Colchester Ltd., Colchester, Essex.

This new catalogue gives details of Aerofoil fans which can be used in multiple stages when contra-rotating fans are specified. Arrangements are made for hingeing the individual fans out of the ducts for maintenance purposes. Another catalogue gives selection tables, including dimensions and weights.

Industrial Notes

● The Board of Trade are considering an application concerning the charging of import duty on machine tools for working metal or metal carbides which fall within heading 84·45 of the Customs and Excise Tariff of the U.K., other than flying shears and strip coilers of a kind used in rolling mills. The application is for the discontinuance of exemption of particular importations by duty-free directions under Section 6 of the Import Duties Act, 1958, and for a reduction in the rate of import duty. Interested parties who wish to make representations in the matter can obtain a statement of the applicants' case if they are prepared to undertake to treat the information as strictly confidential and to allow their comments to be passed to the applicant for reply. Requests for a statement of the case, together with the necessary undertaking, should be addressed in writing to the Board of Trade, Tariff Division, Horse Guards Avenue, London, S.W.1, not later than February 20, 1959.

● Mr. D. D. Morrell, managing director of the Mitchell Construction Co. Ltd., has been appointed a director of Mitchell Engineering Ltd.

● Mr. E. P. Paice, the sales manager of Holoplast Ltd., recently gave a lecture on laminated plastics to students at the Hammersmith School of Arts and Crafts and later repeated his talk to evening students at the Regent Polytechnic School of Architecture, Surveying and Town Planning. Further details of the talk, in which Mr. Paice traced the development, manufacture and uses of this material, can be obtained from Mr. Peter Carvell at 1 Hay Hill, London, W.1 (telephone: Mayfair 9181).

● The headquarters of Semtex Ltd. have been transferred from Hendon to new premises at 19-20 Berners Street, W.1 (telephone: Langham 0401). The new telegraphic address is Semtex Wesdo London and the cable address is Semtex, London.

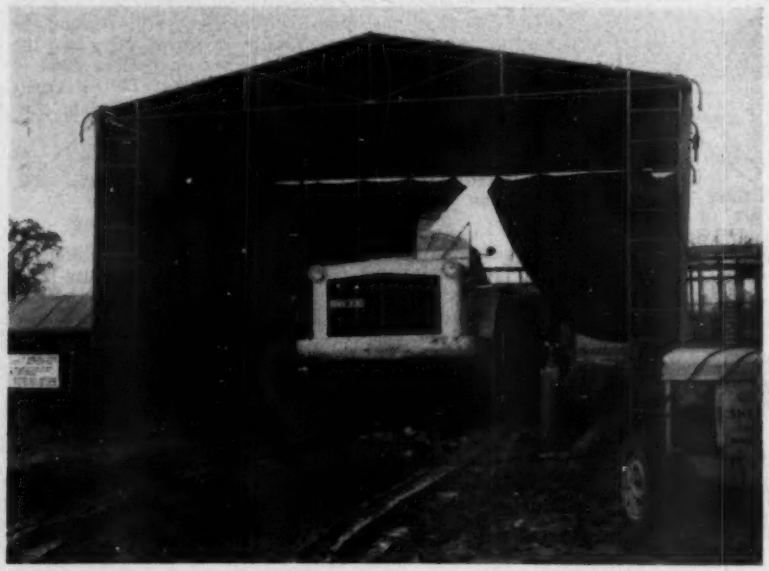
● Mr. D. A. Johnson has been appointed works manager by Robert Marriott Ltd., the Midland firm of contractors.

● Mr. Raymond Oates, of Exchange Publicity Services Ltd., who operates a news and information service on behalf of the Chloride Electrical Storage Group, has moved to Whitfield House, 6-10 Whitfield Street, Tottenham Court Road, London, W.1 (telephone: Museum 1971).

● Mr. A. E. Milner, DIP.M.I.E.S., has joined the A.E.I. Lamp & Lighting Co. Ltd. as senior lighting sales engineer attached to the Leeds area office in the North-East Region.

● Costain (West Africa) have been awarded a contract (valued at over £340,000) for the reconstruction of 47 bridges in Northern Nigeria, some on the Kaduna-Zaria-Funtua-Gusav road and the remainder in the Kano area.

This transportable lightweight temporary building was designed by Mills Scaffold Co. Ltd. and supplied to George Sheppard (Hatfield) Ltd. It was used as a site servicing bay for earth moving equipment on a recent large motorway contract. It was made from self-lock scaffolding and specially designed roof trusses and fitted with a purpose made tarpaulin. The structure measures 25ft by 25ft by 14ft to eaves and was erected by three unskilled men in six hours



● Dussek Bros. & Co. Ltd. show a consolidated net profit for the year ended October 31, 1958, of £73,710 compared with the previous year's result of £66,571. A final ordinary dividend of 14½ per cent has been proposed, making a total distribution for the year of 17½ per cent.

● The Mowlem Construction Co. Ltd., of East Africa, has recently secured contracts for the erection of offices for the Shell Oil Co. in Nairobi, for road works in Uganda and for the erection of new Parliament Buildings in Kampala. The value of these contracts is £1,300,000. Soil Mechanics Ltd., a subsidiary of John Mowlem & Co. Ltd., has been entrusted with the construction of a bulk sugar store for Brooker Bros. in British Guiana. This contract amounts to £760,000.

● The British Plaster Board (Holdings) Ltd. have made an offer to take over the total issued capital of O. J. Bradbury & Son Ltd., of Nottingham, who are merchants of papers and boards and makers of paper bags and waxed papers. The basis of the offer is an issue of five B.P.B. ordinary stock units of 10s each for every nine Bradbury ordinaries of 5s each and 15 B.P.B. 7 per cent preference shares of £1 each for every 14 Bradbury 7½ per cent preference shares of £1 each. The offer is conditional upon its acceptance by holders of not less than 90 per cent of Bradbury's issued ordinary share capital and by holders of a similar percentage of Bradbury's issued preference share capital.

● A.E.I. Lamp & Lighting Co. Ltd. have appointed Mr. H. Cartwright as superintendent of their Leeds sales region. He succeeds Mr. E. Jolley, who will retire later in the year.

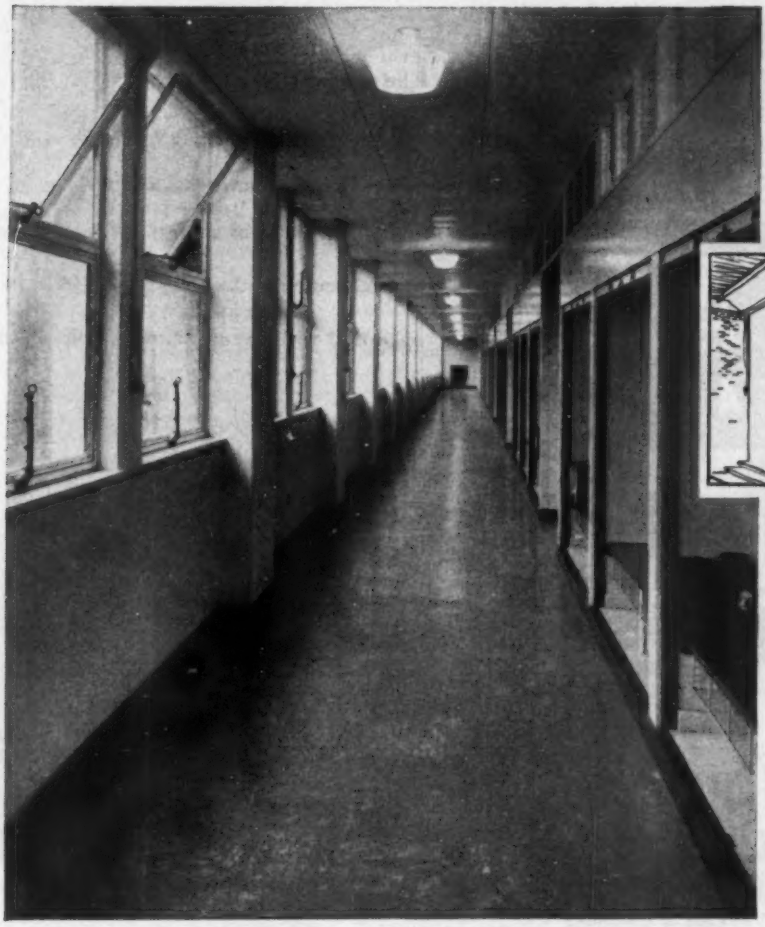
● The offices and warehouse of Griffin & George (Sales) Ltd., at Cheetham Hill Road, Manchester, 4, are now connected to the Telex system on Telex 66-450.

● Aga Veneers Ltd., late of 1 Kingly Court, Regent Street, London, W.1, have now moved to larger premises at 62 Carter Lane, London, E.C.4 (telephone: City 2209).

● Mr. Donald T. McKenzie has been appointed to the staff of Concrete Ltd. as additional London representative.

CORRECTION

Windsor Plaza, illustrated on p. 703 of the A. & B.N., November 26, 1958, was designed by Mr. Peter Dickenson of Peter Dickenson Associates, architects, Toronto. Mr. Max Roth, of Montreal, who was erroneously credited as being the architect for the scheme, has been retained to carry out alterations to the existing hotel and to advise Peter Dickenson Associates on by-laws and similar requirements.



Inside the New Institut Francais building, in which 1,700 yards of ¼" Runnymede Rubber Flooring have been laid.

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CORFIATO THOMSON & PARTNERS

General Contractors:
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91a Lower Ashley Road, Bristol, 2 — *Tel.: Bristol 51380*

★ The specially designed furniture and furnishings for the executive offices, dining room, etc., of the ★ NORTHERN ALUMINIUM COMPANY AT ROGERSTONE were executed by Ian Henderson Ltd., in co-operation with Frank Scarlett, Esq., F.R.I.B.A. ★

AN INTERESTING FLOATING SIDEBOARD in Australian Blackwood and ebony, installed in a Directors' dining room. The centre portion is fitted with trays, having direct access to the servery. This dining room forms part of the new executive offices of The Times Furnishing Co. Ltd., completely designed and executed by Ian Henderson Ltd.

Ian Henderson Ltd. are organised to carry out furnishing schemes to the requirements of architects and interior designers, or to submit new designs.

Specialists in complete office and domestic interiors, including panelling, fitments, fine carpets and beautiful textiles.

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NEW PRODUCTS

In this feature are reviewed new lines introduced to the building industry for the first time and additions or improvements to existing ones. Any advantages claimed for a product are from information supplied by the manufacturer

Vitreous China Closets (A)

A new, close-coupled closet suite in vitreous china has been added to the Ideal-Standard range of such products. It is known as the Kingston closet and the design matches the recently introduced Kingston lavatory basin. It reiterates the "bowl on a pedestal" form, with the close-coupled cistern curving gently into the main shape. The most interesting feature is the double-trap syphonic bowl. The flushing process is efficient, swift and quiet. The closet is available with an "S" or "P" trap, with the latter, the outgo is the same type as it is on the standard wash-down type. A two-, two-and-a-half- or three-gallon cistern is bolted to the back extension. The valveless syphon is made of vitreous china. The cistern has a fine glaze finish and is available in white and the five "Standard" colours.

Ideal Boilers & Radiators Ltd., Ideal House, Gt. Marlborough Street, London, W.1.

Readers' Information Service, Ref. A. Date 11/2/59.

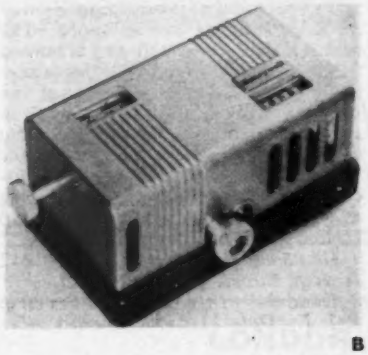
★

New Thermostat (B)

A new thermostat is being used to improve ventilation in factories and other large areas which use unit heaters and forced air convectors for basic heating. An additional control takes over in hot weather to operate the fans when the heating plant is shut down. A unit heater installation can now be controlled entirely from the thermostat, thereby enabling the equipment to be run either automatically or continuously, regardless of temperature factors. The fans can also be stopped completely when the space is unoccupied for long periods. The new thermostat also provides a useful domestic service for loads up to 4kW. The heavy loading allows appliances to be installed which will heat the room much faster initially, without the added expense of installing a double-pole switch. Thus control for the installation can be placed in the room, instead of being near the mains switch and meter. The new features of the thermostat are based on a three-position manual control with a locking device which prevents it being altered by unauthorized persons. The three positions are: "automatic", which brings the conventional function of the thermostat into operation; "on", which allows the fans of unit heaters to turn even when the thermostat is not calling for heat; and "off", which shuts the plant down completely. The new thermostat is intended for use with low-voltage or line equipment, such as radiators, unit heaters, immersion heaters, cooling equipment, solenoid valves, contactors and starters.

Honeywell Controls Ltd., Ruislip Road East, Greenford, Middlesex. Waxlow 2333.

Readers' Information Service, Ref. B. Date 11/2/59.



B

★

Floor-maintenance Machine (C)

A new, all-purpose, industrial-type, floor-maintenance machine has recently been introduced. Known as the Turmix, the new machine has single-hand control and is capable of carrying out sanding, scurfing, scrubbing, waxing and polishing. It is claimed that the machine is completely non-splash and will clean right up to the wall and into the corners. Unlike the orthodox cleaners with circular or cylindrical spinning brushes, the Turmix uses a slender rectangular element which moves in an elliptical rotation of 3,000 revs./minute. This high-speed reproduction of the normal hand movement is stated to do away with the centrifugal force which spreads dust and splashes water. Wooden flooring and linoleum, rubber or cork coverings can be skimmed down to the original surface, scrubbed and polished. Concrete or marble floors can also be scrubbed. Power is provided by an electric induction motor which has no carbon brushes or centrifugal regulator, and is transmitted directly from the motor spindle to an eccentrically arranged ball bearing. There are no belts, chains or gears. Width of brushes (or elements) is 17in. Height of base is 10in. Weight: 75lb. Price: Mark I £90; Mark II £55.

Gravity Feed Slicing Machine Co. Ltd., 61-63 *St. John Street, London, E.C.*1. *Clerkenwell* 4060.

Readers' Information Service, Ref. C. Date 11/2/59.

A

New Plastic Flooring

This company has purchased the Swiss patent, and is applying for the British patents, of a new plastic flooring material known as Plasik. The material is trowelled onto screeded concrete to a total thickness of about ¼in in two layers and can be taken up over a preformed cove and up the walls to form dados. The flooring is made in clear translucent colours and is stated to be suitable for use in many situations, including factories, hospitals, canteens, lavatories, bathrooms and kitchens. It is claimed that Plasik is hard wearing and will stand up to heavy trucking; is resistant to oil, grease, chemicals, lactic acid and urine; is unaffected by dampness, either above or below; will not dust or sweat and is non-slip. The only necessary maintenance is by cleaning with water and an abrasive.

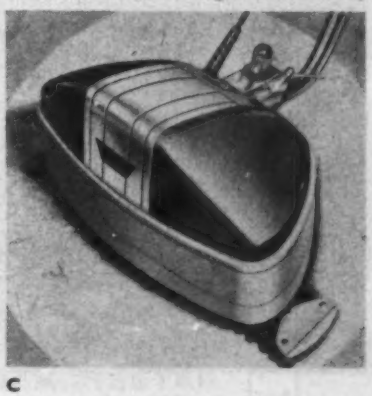
Vigers Bros. Ltd., Broadway Chambers, Ludgate Broadway, E.C.4.

Readers' Information Service, Ref. D. Date 11/2/59.

★

New Translucent Roof Lighting Material

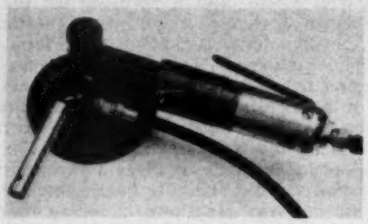
Rufelite-Polyply is a new roofing material produced from a polythene lamination process which is claimed to extend the effective light conductivity



C

NEW PRODUCTS (continued)

life of the sheeting by as much as 500 per cent. In ordinary fibre-glass reinforced sheeting, individual strands of fibrous glass on or near the surface of the sheet are not completely encased in polyester resin and are natural traps for dirt and moisture. This causes fibre blushing or discolouration and eventually reduces light transmission. In the new product these exposed fibres are completely eliminated in order to prevent surface deterioration and loss of translucency. The new material is essentially a laminate of a fibreglass reinforced plastic base, plus a bonded protective overall lamination of transparent polythene specially treated to inhibit oxidation. Rufelite-Polyply is available in a full range of sizes to match all standard profiles. It is shatterproof, resistant to weather and chemical attack, is easily worked and no special fittings are needed for installation. Besides roofing, it can be



H

used for walls and partitions in business, industrial and commercial buildings.

S.P. Structural Plastics Ltd., Eythorne, Dover, Kent.

Readers' Information Service, Ref. E. Date 11/2/59.

★

Site Road-making Material (F)

Temporary vehicle tracks to new building sites, which at this time of the year rapidly become a sea of mud, can now be turned into semi-permanent roadways by means of a new development known as Trakmat. The product consists of chestnut pales sandwiched between two layers of high-tensile steel mesh. Trakmat will, it is claimed, support loads up to 10 tons when laid flat on very soft ground and even sand; if stacked suitably it will support a 3-ton lorry across a narrow culvert. It can also be used for setting up low-cost hard standings. The square mesh upper and lower sheets of the units take the tensile load and the chestnut rods between them serve as spacers and increase the moment of inertia for bending about a horizontal axis. Units can be joined by S-shaped steel clips and gaps between units may be prevented by arranging upper mesh sheets so that they overlap. Standard sizes are 6ft 9in by 2ft 9in and 12ft by 7ft. Prices: 30s per sq yd.

Bracketing, Centering & Lathing Ltd., Central Avenue, West Molesey.

Readers' Information Service, Ref. F. Date 11/2/59.

★

New Wood Veneer

Aga Permagon is a new, parchment backed, transparent, flexible wood veneer. It is suitable for a wide variety of uses including lampshades, door screens and ceiling lights. It can be sensitized and printed upon, and the company can supply the veneer already printed with customers' own designs, paintings or photographs if required. A striking effect can be obtained with a colour printing, if it is illuminated from behind, since the light will bring out the sparkle and life in the wood grain.

Aga Veneers Ltd., 62 Carter Lane, Doctors' Commons, London, E.C.4.

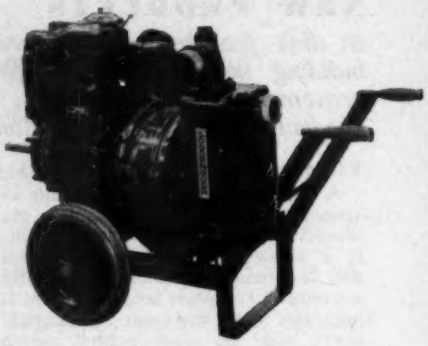
Readers' Information Service, Ref. G. Date 11/2/59.

★

New Pneumatic Sander (H)

A new, lightweight, pneumatic angle sander, the CP3017AWS, on which Flexback pads can be fitted for wet sanding of irregularly shaped surfaces, has been introduced by this company. The new sander is available in three versions with spindle speeds of 4,500,

F



I

2,700 and 1,500 r.p.m. The motor in each case consists of a high power unit-type vane motor which incorporates a floating rotor. Thus, while 50 per cent more power is obtainable than with other types of motor, end plate wear is eliminated. Ball or needle bearings are used for all revolving parts and lubrication of the motor is by a built-in oil reservoir, the gearing being lubricated through a convenient filler-plug without disassembly of the gearing. Water-feed to the sanding pad is by means of a water connection feeding through the spindle shaft and the tool is supplied for operation from a ¼in dia air hose, a ¼in female thread inlet being fitted. A lever type throttle is standard and is used in conjunction with a dead handle. The sanders are designed for operation with either 5in or 7in rubber pads or 7in Flexback pads.

Consolidated Pneumatic Tool Co. Ltd., 232 Dawes Road, S.W.6.

Readers' Information Service, Ref. H. Date 11/2/59.

★

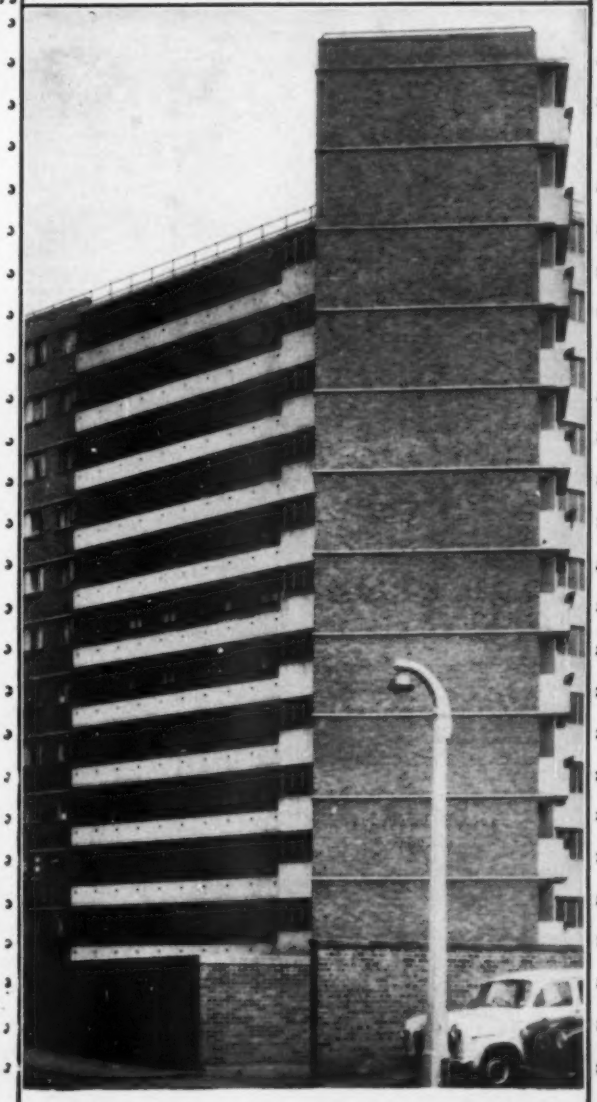
New Diesel Pump (I)

A new, portable, close-coupled, 3in, diesel-driven pumping set, incorporating the Lister SL.1 air-cooled engine, and mounted on a cushion-tyred trolley, is the latest addition to the Goodenough range of pumps. This model, the 315LD pump, is of the automatically self-priming centrifugal type and it is claimed that exceptionally fast re-priming is obtained up to a suction lift of 25ft. The pump is of robust construction, suitable for all contractor's duties, and capable of handling sandy and muddy water containing up to 25 per cent solids in suspension. It will operate equally well on large volumes and on snore. The seal is a dual-faced unit and is housed in an oil reservoir outside the pumping chamber. The impeller is of the four-vane, open-thrash type, made in manganese bronze, and the pump body is fitted with a steel renewable wearing plate. The malleable iron discharge branch is fitted with a filler-plug and provision is made for draining and cleaning out the pump.

Goodenough Pumps Ltd., 112 Jermyn Street, London, S.W.1.

Readers' Information Service, Ref. I. Date 11/2/59.

If you're thinking of building flats



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Tel: BIRchfields 5041

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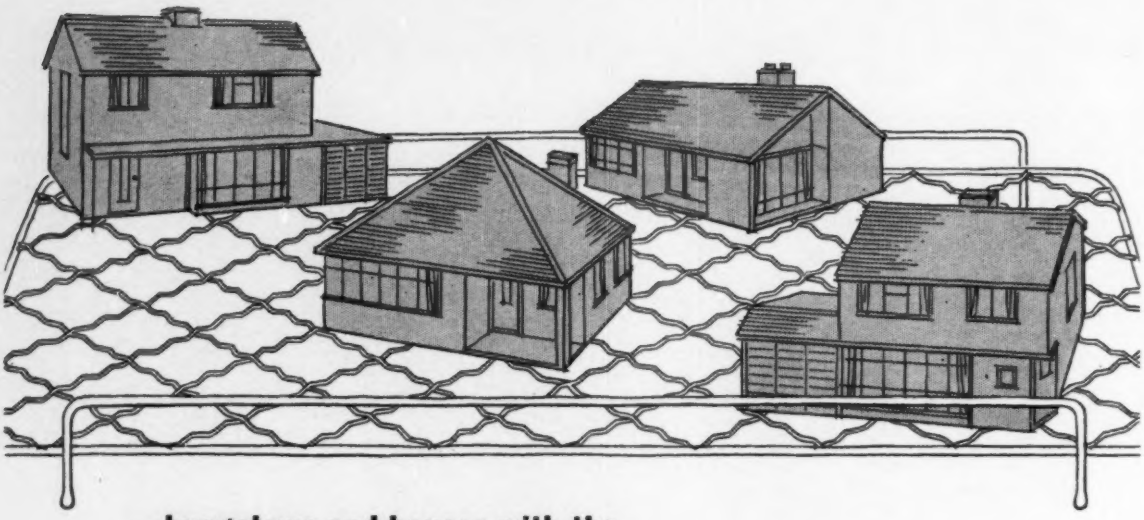

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'POTTERTON' WARM AIR UNIT

Simplest to install and most economical of all space-heating systems, the 'Potterton' Warm Air Unit adds several times its cost to the value of new bungalows and small two-storey houses.

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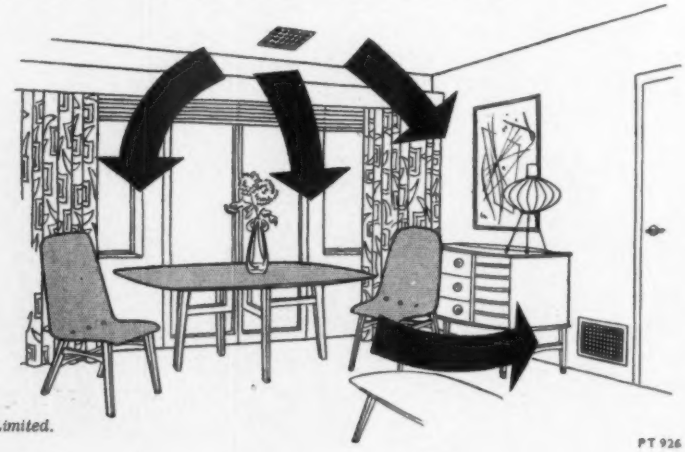
For further information. Write to the address below for illustrated leaflet with full details of the 'Potterton' Warm Air Unit and — very important — 'Diplomat' Gas-Fired Boilers with which it gives the most satisfactory results.



THOMAS POTTERTON LIMITED,
20/30 Buckhold Road, London S.W.18.
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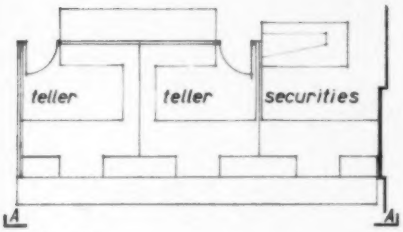
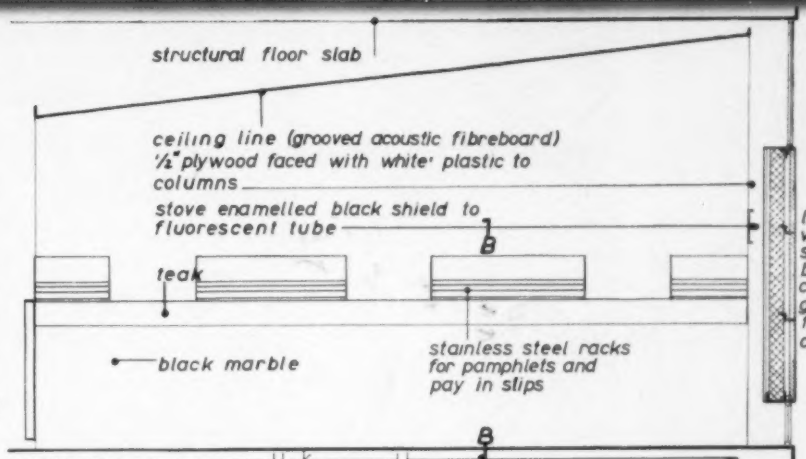
PT 926

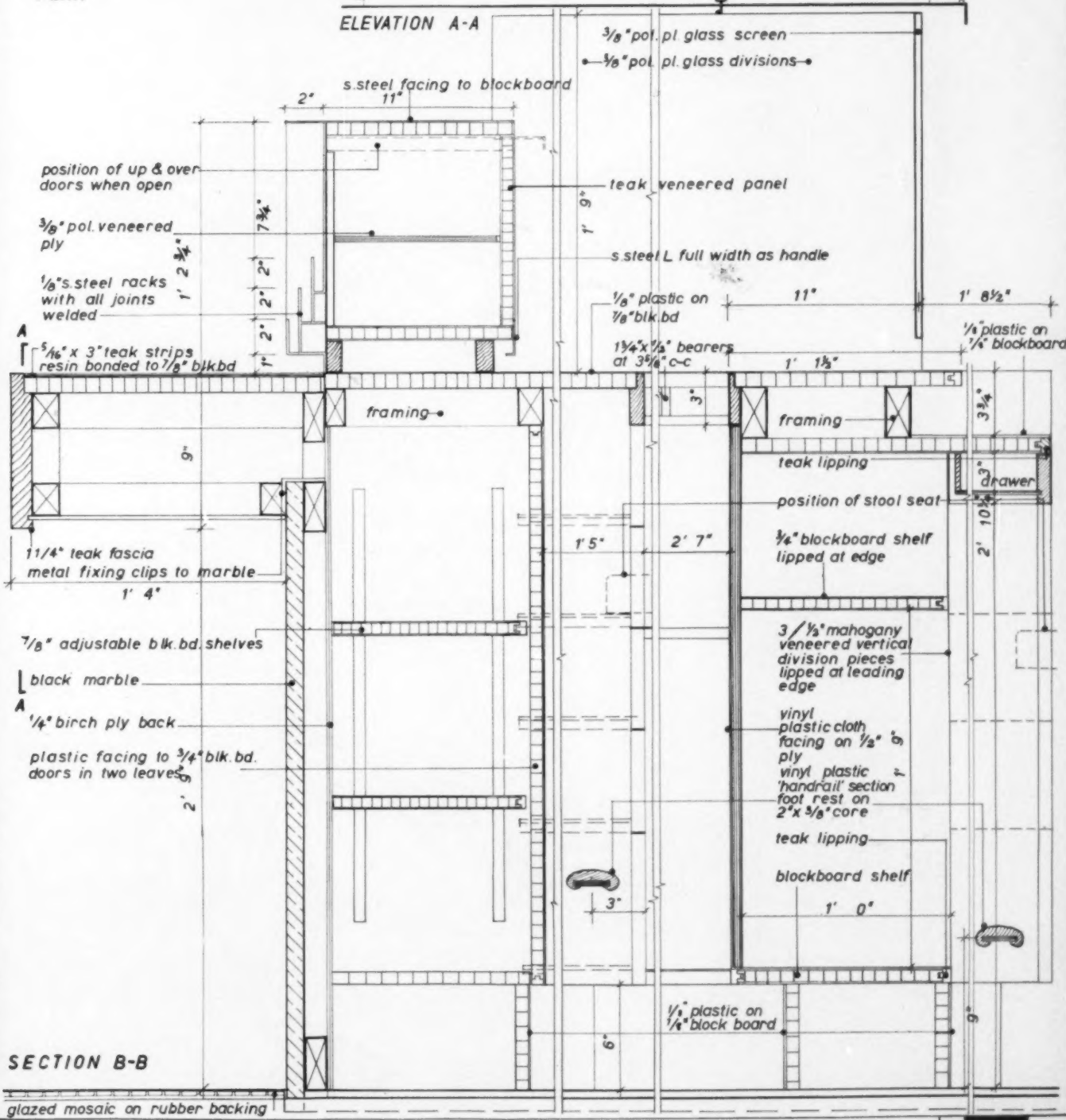
THE ARCHITECT and Building News,
11 February 1959



PLAN


structural floor slab
ceiling line (grooved acoustic fibreboard)
½" plywood faced with white plastic to columns
stove enamelled black shield to fluorescent tube
B
teak
black marble
stainless steel racks for pamphlets and pay in slips
l.w. block wall on steel Ls&Cs between columns, all granite faced. See detail 523
B

ELEVATION A-A


3/8" pol. pl. glass screen
⅛" pol. pl. glass divisions
s.steel facing to blockboard
2"
11"
position of up & over doors when open
teak veneered panel
3/8" pol. veneered ply
s.steel L full width as handle
⅛" s.steel racks with all joints welded
⅛" plastic on ⅞" blk.bd
11"
1' 8½"
⅛" plastic on ¼" blockboard
A
5/16" x 3" teak strips resin bonded to ⅞" blk.bd
1½" x ⅞" bearers at 3 5/8" c-c
1' 1½"
framing
framing
teak lipping
drawer
position of stool seat
11/4" teak fascia
metal fixing clips to marble
1' 4"
1' 5"
2' 7"
¾" blockboard shelf lipped at edge
⅞" adjustable blk.bd. shelves
3/½" mahogany veneered vertical division pieces lipped at leading edge
black marble
A
¼" birch ply back
plastic facing to ¾" blk.bd. doors in two leaves
vinyl plastic cloth facing on ½" ply
vinyl plastic 'handrail' section foot rest on 2" x ⅜" core
teak lipping
blockboard shelf
3"
1' 0"
⅛" plastic on ¼" block board
glazed mosaic on rubber backing

SECTION B-B

CASHIER & CLERKS' COUNTER. BANK WASHINGTON HOTEL. CURZON ST. LONDON. BRONEK KATZ & R VAUGHAN

Within the limits imposed by the functions of a bank, the National Bank of Scotland has made a complete break away from traditional bank design. The front of the counter is in black marble, with a teak facia to the counter top. Horizontal surfaces are teak strip on the public side and black plastic surface on the cashiers' side to stand up to the heavy wear imposed by the counting of coins. The floor is glazed mosaic on a rubber backing set on screed. The rack for pamphlets and pay-in slips is in stainless steel. The architects are Bronek Katz and R. Vaughan

BANK CASHIER & CLERK'S COUNTER
WASHINGTON HOTEL, CURZON STREET, LONDON

CONTRACT • NEWS •

OPEN

*Notes below give basic data of contracts open under locality and authority which are in a bold type. References indicate: (a) type of work (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading (c) deposit (d) last date of application (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.*

BUILDING

ALDRIDGE U.C. (a) Fixed price tenders for the erection of a community hall at Streetly, at an estimated cost in the region of £18,000. (b) Council's Clerk, The Council House, Aldridge, Staffs, stating that they are able and willing to submit a bona fide tender and to complete the contract expeditiously. (d) February 17. (e) March 23.

* * *

ARNOLD U.C. (a) 30 houses at Sherbrook estate. (b) Surveyor, Council Offices, Arnot Hill House, Arnold, Notts. (c) £2. (e) February 24.

* * *

ARNOLD U.C. (a) Small extension to workshop, Arnot Hill Park. (b) Surveyor, Council Offices, Arnot Hill House, Arnold, Notts. (c) £2. (e) February 24.

* * *

ASHBOURNE R.C. (a) One block of four houses, together with site works at Mappleton. (b) A. Percy Taylor, Midland Bank Chambers, Belper, Derbyshire. (c) 2gn by cheque, payable to Council. (e) February 26.

* * *

ASHBOURNE U.C. (a) Fixed price tenders for the erection of 12 dwellings at Okeover Avenue, Ashbourne, Derbyshire, Contract No. 10. (b) Engineer and Surveyor, Compton Office, Ashbourne. (c) 1gn. (e) March 9.

* * *

ASHBY DE LA ZOUCH R.C. (a) 12 houses and four bungalows, construction of roadworks and laying of sewers and water mains at Measham Road, Appleby Magna. (b) Council's Surveyor, Council Offices, South Street, Ashby de la Zouch, Leicestershire. (c) 2gn. (e) March 16.

* * *

BARNSLEY B.C. (a) 100 houses on St. Helen's housing estate, Contract No. SH.1. (b) Borough Engineer, Town Hall, Barnsley. (c) 2gn. (e) February 24.

* * *

BASILDON U.C. (a) Erection of 24 bed-sitting room flatlets, seven bed-sitting room bungalows, communal rooms and warden's quarters at Pound Lane, Laindon. (b) Council's Engineer and Surveyor, 108 High Street, Billericay. (c) 2gn.

* * *

BATH C.C. (a) Erection of the first instalment of a new infants' school at Twerton estate, Bath. (b) Paul K. Pope, Esq., architect, 18 Brock Street, Bath. (c) 2gn by cheque, payable to Bath Corporation. (d) February 14.

* * *

BRIGHOUSE B.C. (a) Fixed price tenders for the erection of (Contract No. 47) 12 flats on Gain Lane estate, Southowram, (No. 66) 24 houses on Field Lane estate, Rastrick, (No. 67) 28 flats on Field Lane estate, and (No. 68) 16 old persons bungalows on Field Lane estate. (b) Borough Engineer, Commercial Street, Brighouse. (e) March 12.

HEALTH and INCOME

Good health is part of the professional man's capital and disablement from accident or sickness is soon reflected in his income.
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BREDBURY AND ROMILEY U.C. (a) 23 one-bedroom type bungalows at Ruskin Grove. (b) Engineer and Surveyor, Council Offices, Bredbury. (c) 2gn. (e) February 28.

* * *

CANVEY ISLAND U.C. (a) (i) Construction of soil and surface water sewers, carriageways, kerbing, footpaths, and verges and (ii) erection of 32 bungalows and semi-bungalows, at Little Gypps Road site. (b) R. H. Stevens, Esq., Council Offices, Canvey Island. (c) February 27.

* * *

CHATHAM B.C. (a) Erection of one block of 12 flats in Ordnance Street and one block of 12 flats at Hardstown. (b) Borough Engineer, Town Hall, Chatham. (c) 2gn. (e) March 2.

* * *

CHIGWELL U.C. (a) Two pairs of semi-detached cottages, one pair on each of two separate sites in Loughton. (b) Engineer and Surveyor, Council Offices, Old Station Road, Loughton, Essex. (c) 2gn. (d) February 27.

* * *

COUNTY OF LINCOLN—PARTS OF KESTEVEN. (a) Alterations and additions to Grantham Earlesfield Children's Home to form a day special school. (b) County Architect, County Offices, Sleaford, Lincs. (d) February 16. (e) March 17.

* * *

COUNTY OF LINCOLN—PARTS OF KESTEVEN. (a) (i) Extensions at Bourne Grammar School, and (ii) extensions to form first instalment at Stamford Fane Secondary School. (b) County Architect County Offices, Sleaford, Lincs, by February 16. (e) March 17.

* * *

CWMAMMAN U.C. (a) Fixed price tenders for the erection of a block of flats for aged people at Garnant, Carms. (b) Mr. W. S. P. Cottrell, 8 Quay Street, Carmarthen. (c) 2gn. (e) February 28.

* * *

EASTHAMPSTEAD R.C. (a) Six shops and six flats on Fernbank Place estate, Fernbank Road, Ascot. (b) Engineer and Surveyor, Council Offices, Bracknell, Berks. (c) 3gn. (e) March 2.

* * *

EAST RIDING OF YORKSHIRE C.C. (a) Three pairs of semi-detached houses at Beverley. (b) County Architect, County Hall, Beverley. (c) 2gn. (cheques payable to County Treasurer). (e) February 24.

* * *

EAST SUFFOLK C.C. (a) Alterations and additions, estimated to cost £21,000, to form a home for old people, at Wilmington, Lowestoft. (b) County Architect, County Hall, Ipswich. (d) February 16. (e) March 13.

* * *

EIRE—CASTLEBLAYNEY U.D.C. (a) Waterworks development scheme, section 1. (b) J. J. McGinn, Esq., Town Clerk, Courthouse, Castleblayney, Co. Monahan. (c) 10gn. (e) March 12.

* * *

EIRE—KILDARE C.C. (a) Carrying out of regional water supply scheme 2/3, Contract No. 5. (b) Mr. Michael Cantrell, 6 Burlington Road, Dublin. (c) 10gn. (e) March 14.

ESSEX C.C. (a) Erection of (i) schoolkeeper's house at Ingatestone Secondary School; (ii) lavatory block at Elsenham C.E. Primary School, and (iii) additional classrooms at Lexden Primary School. Estimated costs (i) £2,250; (ii) £2,500 and (iii) £6,583. (b) County Architect, County Hall, Chelmsford, Essex. (d) February 14.

* * *

FAREHAM U.C. (a) Erection of changing rooms and lavatories at Burridge and Wicor, Portchester recreation grounds, on fixed price basis. (b) Engineer and Surveyor, Westbury Manor, Fareham, Hants. (c) 2gn. (e) February 23.

* * *

FAREHAM U.C. (a) Erection of (i) 14 houses at Hunts Pond Road, Locksheath; (ii) 49 dwellings at Winnards Park extension, Sarisbury; (iii) 90 dwellings at West End estate, Fareham, on fixed price basis. (b) Engineer and Surveyor, Westbury Manor, Fareham. Hants. (c) £2 each contract.

* * *

HEYWOOD B.C. (a) Fixed price tenders for the erection of 96 dwellings on Heady Hill estate. (b) Borough Engineer, Municipal Buildings, Heywood. (c) 4gn. (e) March 11.

* * *

HUDDERSFIELD B.C. (a) All trades firm price tender for erection of four houses on site in Leeds Road, Bradley, Huddersfield. (b) Borough Architect, High Street Buildings, Huddersfield. (c) 2gn. (e) March 11.

* * *

HUNTINGDONSHIRE EDUCATION COMMITTEE. (a) Fixed price tenders for the erection of the first instalment of a one-form entry junior and infants' school at Upwood R.A.F. Station. (b) County Architect, County Buildings, Huntingdon. (c) 2gn. (e) March 4.

* * *

HYDE B.C. (a) Preliminary tenders for design and erection of municipal housing, for development of a site of approx. 6·75 acres within the borough, also design and construction of roads. (b) Borough Surveyor, Municipal Buildings, Greenfield Street, Hyde, Cheshire. (e) March 9.

* * *

LANGPORT R.C. (a) Demolition of a row of six cottages and erection of three pairs of houses and site works at Keinton Mandeville. (b) Messrs. Darby, Hill and Partners, Westminster Bank Chambers, Taunton. (c) 2gn. (e) February 24.

* * *

LINCOLN C.C. (a) Erection of extensions to the existing old people's home in Burton Road, Lincoln, on fixed price basis. (b) City Architect, Stamp End, Lincoln. (c) 2gn (cheques payable to Corporation). (e) March 9.

* * *

LINDSEY C.C. (a) Erection of the first instalment of Sturton-by-Stow Secondary Modern School. (b) County Architect, County Offices, Lincoln. (e) March 12.

LIVERPOOL C.C. (a) Erection of (i) 14 maisonnettes, Petton Street, Liverpool, 5; (ii) five flats, Aber Street, Liverpool, 6; and (iii) access road and sewers, Croxteth Estate (part 4). (b) City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2. (c) 2gn. each contract, payable to City Treasurer. (e) February 19.

* * *

LONDON—HAMPSTEAD B.C. (a) Conversion of properties for multi-family occupation. (b) Town Clerk, Town Hall, Haverstock Hill, N.W.3 by February 17, for inclusion on the approved list of contractors who will be invited to tender from time to time.

* * *

MACCLESFIELD B.C. (a) Fixed price tenders for the erection of five dwellings and three garages at Monsall Close. (b) Borough Architect, 3 Jordangate, Macclesfield. (c) 2gn. (e) February 27.

* * *

MAIDENHEAD B.C. (a) 11 pairs of houses and one block of four houses at Coxgreen estate, Contract 5K. (b) Borough Engineer, 14 Craufurd Rise, Maidenhead, Berks. (c) 2gn. (e) March 9.

* * *

MIDDLETON B.C. (a) 35 houses, 36 flats and eight garages at Sedgley Street, Middleton junction. (b) Borough Surveyor, Town Hall, Middleton, near Manchester. (c) 2gn. (e) February 28 (firm price).

* * *

NANTWICH R.C. (a) One block of four one-bedroomed bungalows at Broad Lane, Stapeley, on fixed price basis. (b) Engineer and Surveyor, Stapeley House, Nantwich, Cheshire. (c) 2gn. (e) February 25.

* * *

NORTHAMPTON B.C. (a) (Groups 10 and 11) 75 dwellings, (Groups 12 and 13) 54 dwellings and (Group 14) 29 dwellings, at Kings Heath, Northampton. (b) Borough Architect, Guildhall, Northampton, before February 16. (c) 2gn each contract, by cheque payable to Corporation. (e) March 18.

* * *

N. IRELAND—BANBRIDGE U.D.C. (a) Construction of sewerage scheme—Contract No. 3. (b) U.D.C. Offices Banbridge, Co. Down. (c) 5gn. (e) March 2. Down. (c) 5gn. (e) March 2.

* * *

N. IRELAND—DONAGH (Fermanagh) (a) Erection and completion of new primary school, for Rev. H. F. O'Hanlon. (b) John A. Tynan, quantity surveyor, 68 Royal Avenue, Belfast. (c) 5gn. (e) February 27.

* * *

N. IRELAND—DOWN EDUCATION COMMITTEE. (a) Supply, delivery and erection of steelwork at Newtownards (new) Grammar School. (b) Messrs. W. D. R. and R. T. Taggart, 13 College Gardens, Belfast. (c) 3gn. (e) February 26.

N. IRELAND—LISBURN U.D.C. (a) Construction of a relief sewer in the town centre. (b) Office of the Town Surveyor, Town Hall, Lisburn. (c) 3gn. (e) March 3.

* * *

N. IRELAND—MINISTRY OF FINANCE. (a) Construction of an automatic telephone exchange at Diamond Gardens, Finaghy, Belfast. (b) Room 103, Law Courts Building, Belfast. (c) £5. (e) March 2.

* * *

N. IRELAND—MINISTRY OF FINANCE. (a) Erection of an extension to an existing building at Stranmills Training College, Belfast. (b) Room 103, Law Courts Building, Belfast. (c) £5. (e) February 26.

* * *

NORTH RIDING E.C. (a) Erection of stage three (extensions) of Eston Grammar School, near Middlesbrough. (b) F. Barraclough, County Hall, Northallerton. (e) March 3.

* * *

NORTHWICH R.C. (a) (Contract No. 12/6) 16 dwellings at Anderton, (No. 12/7) eight dwellings at Cuddington, (No. 12/8) six dwellings at Little Leigh, and (No. 12/10) 20 dwellings at Marston. (b) Engineer and Surveyor, Whitehall, Hartford, Northwich. (c) 2gn. Contractors should indicate which contracts they wish to tender for when applying for document. (e) March 5.

* * *

OSSETT B.C. (a) 13 bungalows and six houses at Streetside and four bungalows and 12 houses at Tately Lane, Ossett, Contracts 1/59 and 2/59. (b) Borough Surveyor, Town Hall, Ossett. (c) 2gn. (e) February 23.

* * *

PONTARDAWE R.C. (a) 14 houses and site works at Gurrachyllwynau, Trebanos. (b) Engineer and Surveyor, Council Offices, Pontardawe. (c) £5 by cheque, payable to Council. (e) February 19.

* * *

RUSHDEN U.C. (a) 12 houses on Hayden Road site, Rushden. (b) Engineer and Surveyor, Council Buildings, Rushden. (e) March 2.

* * *

RUGBY B.C. (a) Four blocks of flats and maisonnettes, comprising 30 dwellings, at Deepmore Road, Rugby. (b) Borough Surveyor, Church Walk, Rugby. (c) 2gn. (e) March 10.

* * *

SALFORD C.C. (a) Firm price tenders for the erection of (i) caretaker's house at Clarendon Secondary School; (ii) caretaker's house at Hope Hall Secondary School and (iii) boundary wall at Clarendon Secondary School. (b) Messrs. J. C. Prestwich & Sons, Bradshawgate Chambers, Leigh. (c) 2gn each contract. (e) February 24.

STANLEY U.C. (a) Erection of communal laundry and rest room at Potovens Lane site. (b) Engineer and Surveyor, Council Offices, Coach Road, Outwood, Wakefield. (c) 1gn. (e) February 28.

* * *

STOKESLEY R.C. (a) Fixed price tenders for (i) Scheme 7/58—24 one-bedroom aged persons bungalows at Nunthorpe Station housing site, (ii) Scheme 8/58—four one-bedroom aged person bungalows at Roseworth, Great Broughton, and (iii) Scheme 9/59—16 one-bedroom aged person bungalows at Beech Close, Great Ayton, together with certain demolition works and construction of about 350 sq. yds. of reinforced concrete carriageway and 255 sq. yds. of footpaths, with incidental foul and surface water sewer works. (b) Engineer and Surveyor, Council Offices, Stokesley, Middlesbrough. (c) 2gn by cheque payable to Council. (e) February 28.

* * *

SWANSEA B.C. (a) Erection of new staff room at Waun Wen Infants' School and new lavatories at Hafod Junior Mixed School. (b) Mr. Oliver S. Portsmouth, Architect, 7 Wind Street, Swansea. (e) March 9.

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SWANSEA B.C. (a) 81 dwellings at Blaen-y-Maes, 77 dwellings at Penlan and eight dwellings at Trewyddfa Common. (b) Borough Architect, The Guildhall, Swansea. (c) £2. (d) February 20 (stating in which scheme interested).

* * *

YORK C.C. (a) Erection of Northfield open air school in Beckford Lane, York. (b) City Architect, 8 St. Leonard's Place, York. (c) £3 (cheques payable to Corporation). (e) February 27.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) *type of work* (2) *site,* (3) *name of contractor and address,* (4) *amount of tender or estimate.* † *denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.*

ILFORD. (1) Departmental stores for Brador Estates Ltd. (2) Cranbrook Road and Ley Street. (3) Pauling Construction Ltd., 26 Victoria Street, London, S.W.1. (4) £250,000.

* * *

LINCOLN C.C. (1) C. of E. Secondary School. (2) Earlesfield, Grantham. (3) Stirton Partners Ltd., 3 St. Mary's Place, Stamford, Lincs. (4) £142,046.

* * *

READING UNIVERSITY. (1) Erection of St. Patrick's Hall of Residence. (3) J. M. Jones & Sons Ltd., Highway Works, Maidenhead. (4) £250,000.

* * *

FARNWORTH. (1) St. James' C. of E. School, for C. of E. Diocese of Manchester. (3) W. Fearnley & Sons (Salford) Ltd., Eccles New Road, Salford, Lancs.

* * *

LONDON E.C. (1) Block of offices for Brown Bros. Ltd. (2) Great Eastern Street, E.C.2 (3) Holliday & Greenwood Ltd., 11 Buckingham Palace Gardens, London, S.W.1. (4) £100,000.

* * *

BIRMINGHAM. (1) Chamber of Commerce headquarters. (2) Harborne Road, Edgbaston. (3) Tersons Ltd., 4 Dollis Park, London, N.3. (4) £500,000.

* * *

LUTON CORPORATION. (1) 255 houses. (2) Lewsey Farm. (3) Drury & Co. Ltd., The Grange, Wigston Fields, Leicester.

* * *

UNIVERSITY OF CAMBRIDGE. (1) Lecture theatre. (2) Lensfield Road. (3) Rattee & Kett Ltd., Station Road, Cambridge. (4) £120,000.

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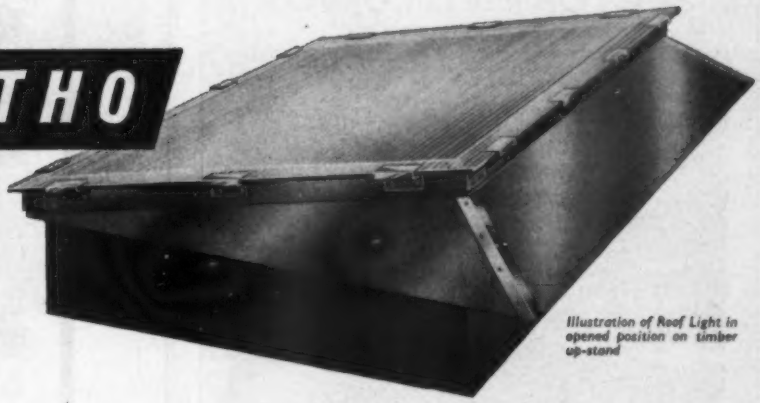

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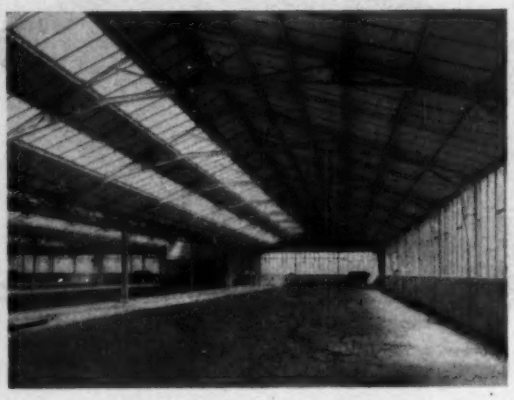

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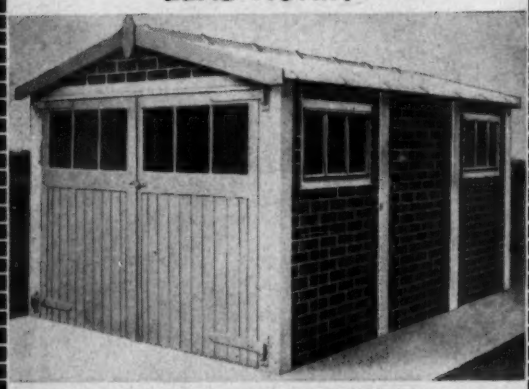

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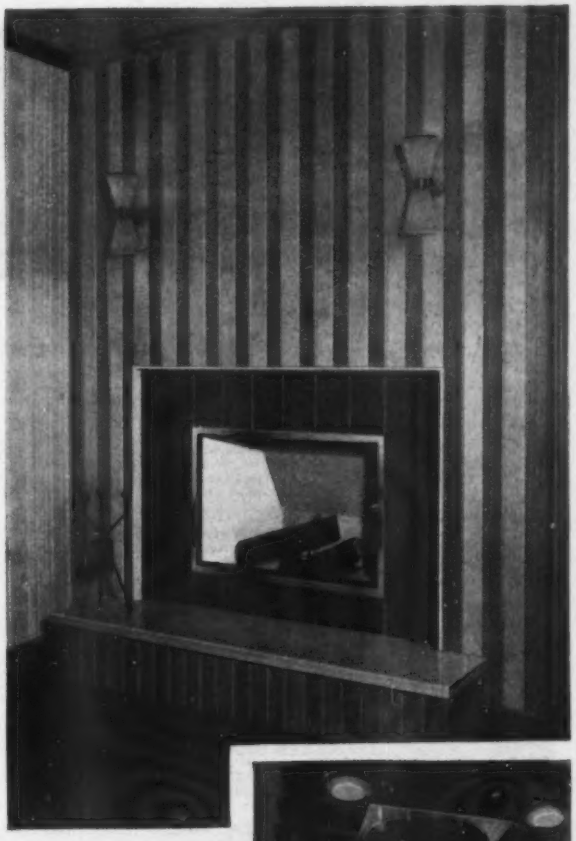

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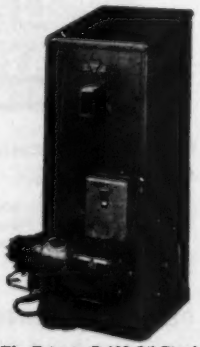

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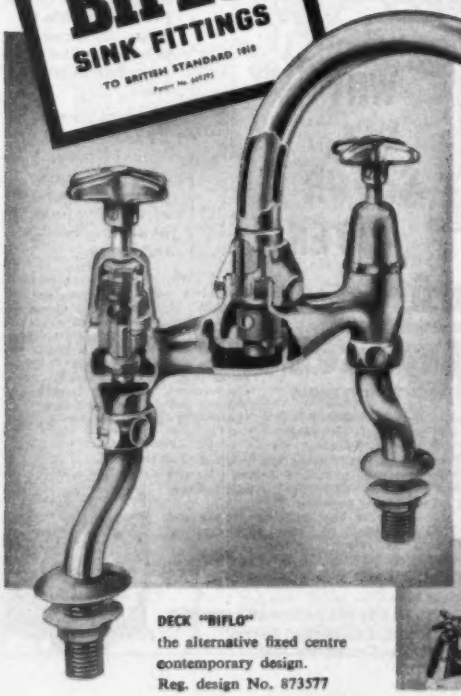

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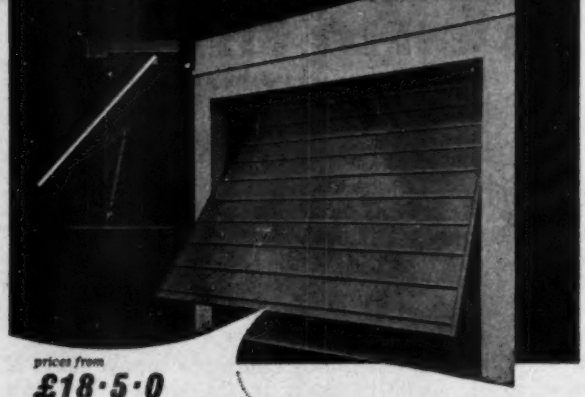

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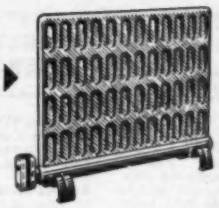

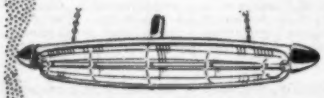

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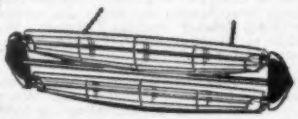

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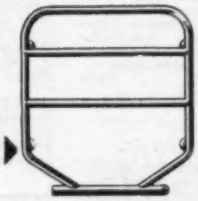

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County Architect's Department

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(b) **Architectural Assistants.** Salary scale A & P VII (£945/£1,025).

(c) **Architectural Assistants.** Salary scale A & P VI (£880/£955).

(d) **Architectural Apprentice Draughtsmen.** Salary scale C.S. Division Junior.

(e) **Senior Assistant Quantity Surveyors.** Salary scale A & P VI/VII (£945/£1,085).

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The appointment is subject to the County Council's Superannuation Scheme, and the successful candidate will require to pass a medical examination.

Canvassing in any form will disqualify and relationship to any member or senior officer of the County Council must be disclosed.

Housing accommodation may be made available.

Applications, stating age, qualifications, and previous appointments, with names and addresses of two referees, should be lodged with James Miller, Esq., A.R.I.B.A., County Architect, Radnor Park School, Clydebank, within ten days from date of this advertisement.

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Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.P.T.I., County Architect, Column House, London Road, Shrewsbury.

Closing date February 28, 1959. [4842

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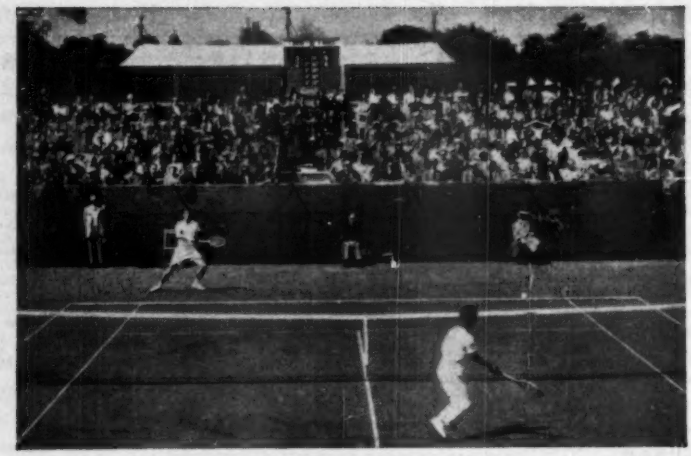

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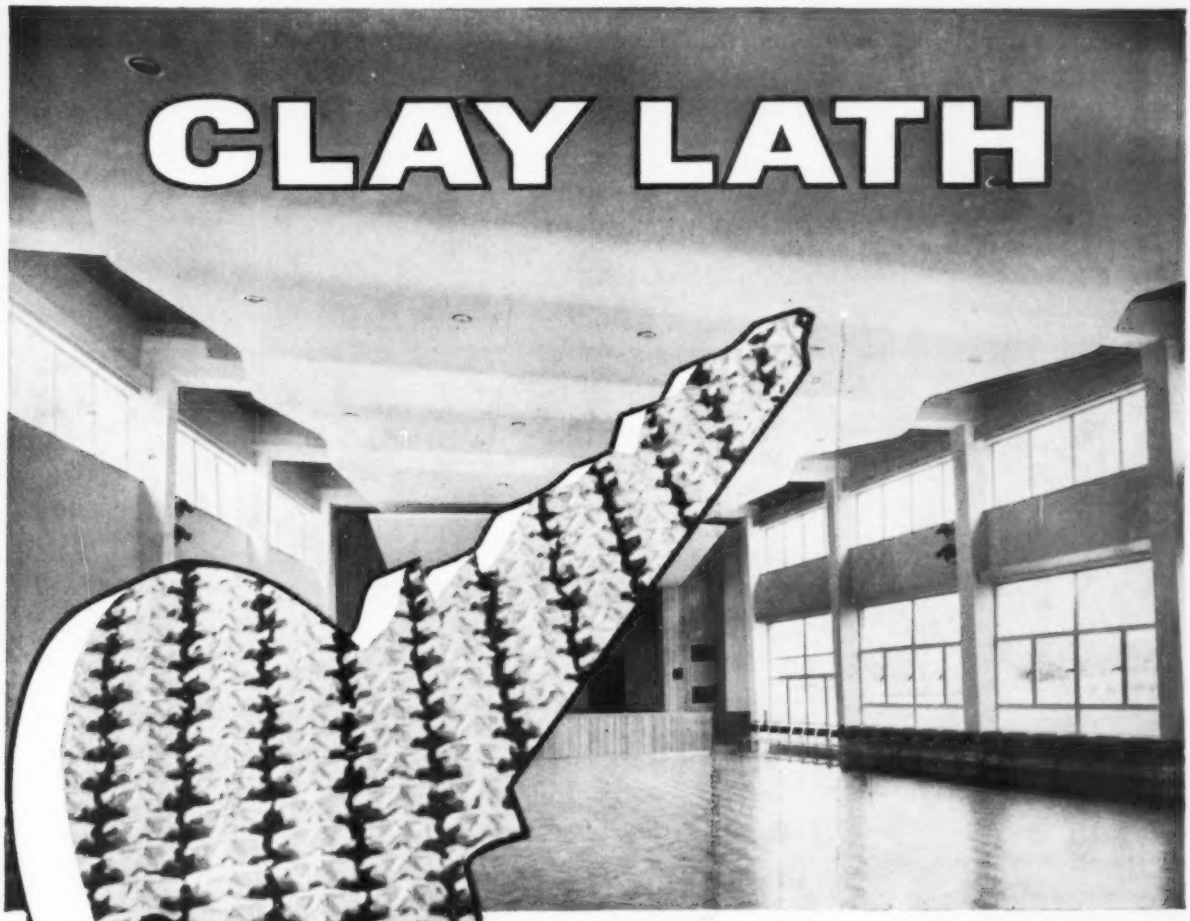

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